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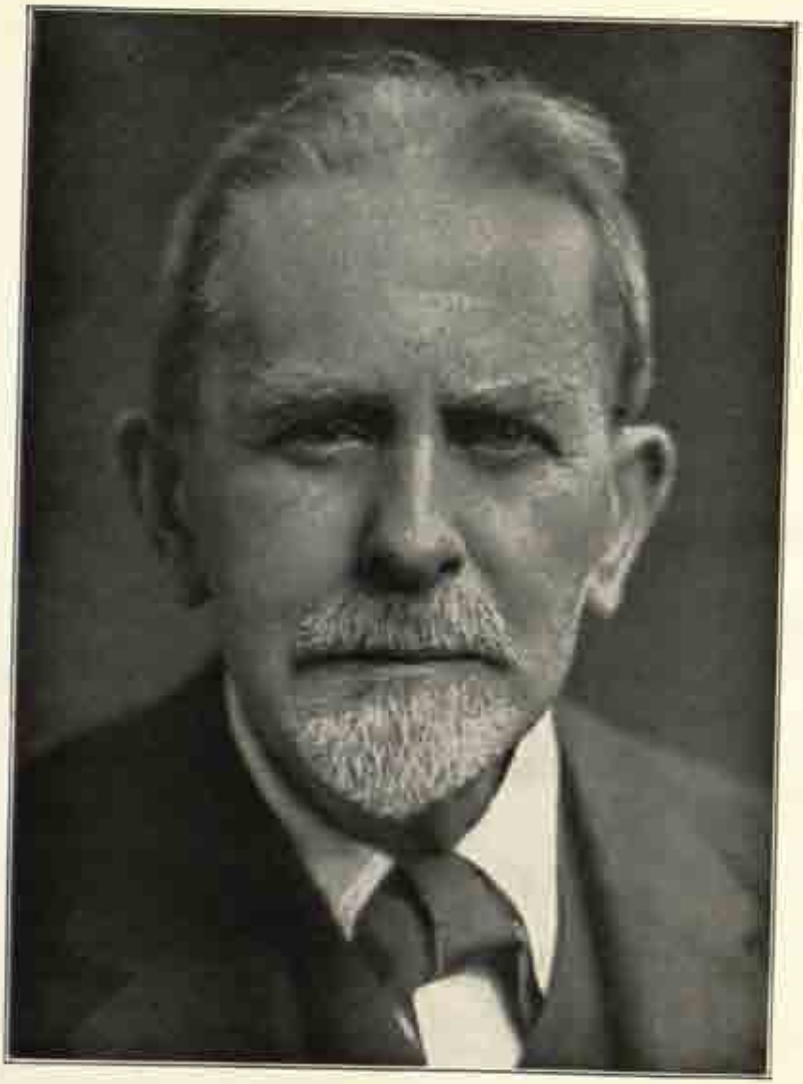

SIR JAMES GEORGE FRAZER, O.M., F.R.S., F.B.A.
1 JANUARY, 1854–7 MAY, 1941.

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ORIGINAL ARTICLES

SIR JAMES GEORGE FRAZER, O.M., F.R.S., F.B.A., 1 JAN., 1854–7 MAY, 1941. *By Professor A. R. Radcliffe Brown, University of Oxford. With Plate A.*

The death of Sir James Frazer took place on 7 May, 1941, and was followed within a few hours by that of his devoted wife. Thus passes into the Land of Shades one of the great pioneers of social anthropology.

Sir James Frazer was born at Glasgow on 1 January, 1854. He was educated at Springfield and Larchfield Academies and matriculated at Glasgow University in November, 1869. At Glasgow his major interest was in classics, in which studies he was powerfully influenced by G. C. Ramsay. In 1873 he won an entrance scholarship at Trinity College, Cambridge, and entered as a student in 1874. There he continued his classical studies, and came under the influence of Henry Jackson. In 1879 he presented a thesis 'On the Growth of Plato's Ideal Theory,' and was elected a Fellow of the College.

Frazer continued his classical studies throughout his life. His publications in this field began with an edition of Sallust in 1884 and ended with his edition of Ovid's *Fasti*, with a translation and commentary, in 1929. His most important contribution to classical studies was undoubtedly his translation and commentary of Pausanias.

Frazer's father wished him to qualify for the Bar, and he was admitted to the Middle Temple in 1881. But about this time began his friendship with Robertson Smith, which led him to take up what became the main work of his long and industrious life. How he conceived the study on which he thus embarked is stated in his biographical sketch of Robertson Smith. "The idea of regarding the "religions of the world not dogmatically but historically—in other words, not as systems of truth or "falsehood to be demonstrated or refuted, but as phenomena of consciousness to be studied like any "other aspect of human nature—is one which seems hardly to have suggested itself before the nine-"teenth century. Now when, laying aside as irrelevant to the purpose in hand the question of the "truth or falsehood of religious beliefs, and the question of the wisdom or folly of religious practices, "we examine side by side the religions of the different races and ages, we find that, while they differ "from each other in many particulars, the resemblances between them are numerous and fundamental, "and that they mutually illustrate and explain each other, the distinctly stated faith and circum-"stantial ritual of one race often clearing up ambiguities in the faith and practice of other races. Thus "the comparative study of religion soon forces on us the conclusion that the course of religious "evolution has been, up to a certain point, very similar among all men, and that no one religion, at "all events in its earlier stages, can be fully understood without a comparison of it with many "others."

Frazer's first publication in anthropology was a paper *On Certain Burial Customs* read before the Anthropological Institute in March, 1885. At the invitation of Robertson Smith and under his inspiration Frazer wrote the articles on 'Taboo' and 'Totemism' for the ninth edition of the *Encyclopedia Britannica* (1888). With these, and *The Golden Bough*, which appeared in its first form in 1890, Frazer took his place as one of the leaders of this new science.

Now that the pen has been laid aside and the work completed, it is possible for us to evaluate Frazer's contribution to the study of man. His conception of the aims and methods of anthropology

are clearly set out in many of his writings, and particularly in the lecture on *Mental Anthropology* that he delivered at Trinity College in 1931. He thought of his subject as the study of the human mind rather than of human society, and preferred that it should be called 'mental anthropology' rather than 'social anthropology.' "Mental "anthropology," he said, "is in great measure "a science of human origins. It investigates, or will hereafter investigate, the origins of language, of the arts, of society, of science, of morality, of "religion." In essentials this is the same kind of investigation as that to the beginnings of which in the eighteenth century Dugald Stewart referred in his introduction to the *Essays of Adam Smith* (1795) and for which he suggested the name of 'Theoretical or Conjectural History.' Perhaps the chief difference was that, between the time of Adam Smith and Turgot and that of Sir James Frazer, what Dugald Stewart calls "the casual observations of travellers" which such an investigation should utilize had grown enormously in quantity.

If we were to judge the value of Frazer's work by the theoretical formulations contained in his writings, such as his hypothesis as to the origin of totemism, it would have to be admitted that these theories have not won and are not likely to win general acceptance. It is an intrinsic weakness of all theories of origin of this kind that they remain conjectural or hypothetical, and cannot be conclusively demonstrated or verified, so that we can only discuss, not their truth, but their plausibility. It is for this reason that some anthropologists of the present day regard this kind of enquiry as unprofitable, or at least less profitable than some others.

But the value of Frazer's work for the new science of anthropology does not depend on whether the theories formulated therein are accepted or rejected. He himself recognized very clearly that in any science, and particularly in the early stages of its development, it is the fate of theories to be replaced by others, as the collection and analysis of data proceeds. The long row of Frazer's writings that occupies the shelves of an anthropologist's library brings together for us a vast mass of data, collected from innumerable sources, so compared and ordered as to reveal something of those underlying resemblances beneath the great superficial diversity of human belief and custom which it was his aim to exhibit. Such wide surveys of world-wide scope were precisely what was needed in the first infancy of the new study. The writings that give us the results of this survey suggest to the thoughtful anthropologist hundreds of problems for further investigation, and offer him a body of data for his guidance in any attempt he may make towards the study of the suggested problems.

But Frazer's work and influence are not simply to be judged by what he has provided for the anthropologist. His writings are known to and appreciated by a vast public of general readers. For them *The Golden Bough* gives a new vision of the life and mind of man. The fascinating tale that opens on the shores of the lake at Nemi and brings into its wide sweep the customs and ideas of the peoples of antiquity, of the peasantry of Europe, and of tribes of savages all over the world, presents to the reader a picture of an important aspect of human life and thought seen from a new angle. One moral that the tale conveys, perhaps not the least important, has been formulated by Frazer himself. "When all "is said and done our resemblances to the savage "are still far more numerous than our differences "from him."

So whatever may be the ultimate verdict as to the scientific value of Frazer's theoretical formulations, *The Golden Bough* must rank as one of the masterpieces of English literature of the nineteenth century, and Frazer must be recognized as one of the great and inspiring leaders of what may be called the 'new humanism.'

Although he delivered courses of lectures at Liverpool and Cambridge, Frazer did not undertake any regular University teaching. He felt that this was not a task for which he was well fitted. His whole life was spent in his library. But he was always ready to give encouragement and help to those beginning, or already engaged in, anthropological studies. As one who knew him for forty years I would say that his outstanding characteristics were his modesty and sincerity, his intellectual honesty and open-mindedness. An old world courtesy covered his somewhat shy and sensitive personality. He did not share that belief in immortality that he so diligently investigated. He looked forward only to an eternal dreamless sleep when his work was done. But his name and his work survive, and the affectionate remembrance of those of us who knew him.

SIR JAMES GEORGE FRAZER, O.M., F.R.S., F.B.A.

By Rev. Professor E. O. James, D.Litt. (Oxon.), University of Leeds.

2 The passing of Sir James George Frazer, O.M., F.R.S., at Cambridge on 7 May at the age of eighty-seven is a significant event in the annals of anthropology, not merely on account of the contribution he has made to our knowledge of human institutions, beliefs, and customs by his vast erudition, but also because his name will always be associated with the method he has made so peculiarly his own. His interest in the science was aroused in the first instance by the works of E. B. Tylor, which he tells us "opened "up a mental vista undreamed of by me before." It was Tylor's great book, *Primitive Culture* (1871) rather than his *Researches into the Early History of Mankind* (1865), that determined Frazer's approach to social anthropology. Therefore, when he began his own independent investigations, in 1885, under the influence and inspiration of his friend, Robertson Smith, it was to the study of the laws of human nature, along the lines laid down by Comte, that he directed his attention.

It is true that, like Tylor, he recognized the principle of diffusion as a factor in the development of culture (*cf. Golden Bough*, Part VIII, Vol. I, pp. vi. ff. x), but it was the essential similarity in the working of the less developed human mind among all races, corresponding to the essential similarity in their bodily frame revealed by comparative anatomy, which seemed to him to constitute the basic fact in the evolution of society. Consequently, adopting the Tylorian method of collecting first and sifting afterwards, Frazer embarked on a voyage of discovery 'from China to Peru,' seizing everything he could lay his hands on which seemed to come within the purpose of his quest, regardless of historical and chronological sequence. Thus, he brought together customs and beliefs which manifested a superficial resemblance to one another without perhaps always giving due consideration to the comparability of the actual occurrences. Nevertheless, if his use of the Comparative Method was liable to confuse priority of type with priority in time, he could at least claim that in other departments of scientific inquiry it is generally recognized that a genetic series is determined by the sum of the internal resemblances, and that simplicity in form usually indicates earlier occurrence.

Whatever may be said, however, concerning his methodology, Frazer will always stand out conspicuously as a man who preserved the scientific spirit in all his work. Thus, he maintained a vigorous impartiality in dealing with his evidence, and used his vast collection of facts to test his theories rather than to illustrate his own contentions. Therefore, he was always ready to abandon a position as soon as it became untenable, as, for example, in his various interpretations of the origin of totemism, which to the end he regarded as tentative hypotheses. Indeed, on one occasion he compared himself to a chameleon, though he never abandoned the method he had made so peculiarly his own. Moreover, many of his brilliant deductions have proved to be correct, as, for instance, the striking confirmation of his theory of the killing of the king by the subsequent discoveries of the rite in operation, made by Seligman, Meek, and P. A. Talbot.

Not least among the many contributions that Frazer has made to anthropology is the interest he has aroused in the subject among the general public, and the knowledge of the science he has diffused outside the more restricted circles of specialized research. In achieving these results the outstanding literary merits of his style have been a great asset, and secured for him an assured position among men of letters of his day. This has been said, in fact, "to be more com-"manding than Gibbon's. For Gibbon only "made ordered and more amusing for the "polished world what was known to every "contemporary scholar about the ancient world. "But Frazer revealed a completely strange world, "and strove to interpret, not to mock its "strangeness."

For more than half a century a succession of weighty tomes have poured forth from the facile 'steel pen' with which he wrote his elegant manuscripts. The material from which these were compiled was contained in series of quarto notebooks (numbering about seventy in all, of three to four hundred pages each) filled with first-hand information from travellers, explorers, missionaries, books, and periodicals in English, French, German, Spanish, Italian, and Dutch. In the course of these investigations almost every aspect of primitive thought was explored, from

taboo and totemism, with which his researches began in his articles for *The Encyclopædia Britannica* in 1885, to the "cycle of *The Golden Bough*" depicting "the long evolution by which "the thoughts and efforts of man have passed "through the successive stages of magic and "religion to science."

In attempting to answer the riddle of the King of the Woods in the Arician grove of Diana, on the sylvan shores of lake Nemi, this versatile author discovered that, in settling one question, he had raised many more. So he was led to examine fields which his predecessors—Mannhardt, Tylor, and the rest—had never traversed. This *magnum opus* completed (in twelve massive volumes published between 1911 and 1915, and now further enlarged by a thirteenth volume, *Aftermath*, issued in 1936) he penetrated deeply into Semitic religion and in 1918 produced in three volumes *Folk-Lore in the Old Testament*. In subsequent years, apart from purely literary studies pursued by way of recreation—which in one instance incidentally revealed his ability to write magnificent Ciceronian Latin—he concentrated on *Belief in Immortality and the Worship of the Dead* (1922, 1924), the *Worship of Nature* (1926), *Myths of the Origin of Fire* (1930), and *Fear of the Dead* (1933, 1934, 1936), returning, finally in 1937, in a Supplement, *Totemica*, to his earlier four volumes, *Totemism and Exogamy*, produced in 1910 under the inspiration of Baldwin Spencer's discoveries in Australia.

As H. N. Brailsford has said, "when posterity "comes to estimate the work of our age, the "records of Sir James Frazer would suffice "almost of itself, to redeem it of a charge of "sterility . . . The mere bulk which this man "has produced, since *The Golden Bough* grew "from its two volumes to its twelve, would compel "respect, but when one analyses a page of his "writing, with its closely-packed material, drawn "from a dozen sources in five or six languages, "one asks by what miracle he fitted twenty-four "months into his year."

AN APPLICATION OF BURT'S MULTIPLE GENERAL FACTOR ANALYSIS TO THE DELINEATION OF PHYSICAL TYPES.

By W. H. Hammond, University College, London.

This paper is an attempt to analyse two sets of physical measurements in order to see whether it is possible to distinguish a number of physical types.

The problem is approached in much the same way that one would adopt in attempting to establish types in the intellectual or temperamental spheres. In this case the approach is *via* the analysis of physical traits such as stature, arm length, chest width, etc., and the assumption is made that if groups of traits can be shown to cohere, then the population can be divided into types according to the predominance of one or other group in the individual's make-up. The immediate problems are: what traits can form the most suitable basis of physical types, and, further, what traits are the most diagnostic of such types?

For our purpose the first question is partly answered by the initial selection of measurements, since some indication of the types which may be expected is given by previous studies[1] wherein the distinction between long-limbed, lean and narrow types, and broad, stocky or plump types is suggested. The initial choice of tests here used is intended to bring out these differences. From this point of view the measurements were not quite ideal since they were not taken specifically for the purpose of demonstrating types, but they were the best available.

Two samples of physical measurement were examined. The first contains 100 adult males representing part of a survey of N. Ireland made by J. M. Mogey, M.A., to whom I am indebted for permission to make use of his data. The original measurements of this sample are so far unpublished, but full measurements are given in the London University copy of my thesis *Factorial Analysis in the Study of Types*, 1941. The other sample contains 40 individuals taken at random from different parts of Wales in the survey made under Professor Fleure and recorded in the *Bulletin of the Board of Celtic Studies*, Vols. IV ff., and was intended to supply some confirmation of the first.

Measuring Technique and the Sample

The North Ireland measurements were taken in

[1] *Cf.* Westermarck, E.: *Eurysomes and Leptosomes*. Rel. R. Ruggles Gates: *Heredity in Man. Necessarii: Meso- and Macro-Splanchnics, Morphologic Aspect of Intelligence, Pyknics and Asthenics.* Kretschmer: *Physique and Character.*

accordance with Hrdlicka's technique, which differs little from that given in the *British Association Handbook of Anthropometry*, 1908 (*Report on Anthropometric Method*).

The 100 individuals comprising the sample are of fairly diverse racial constitution, yet they are highly representative of the region as a whole, as is shown by a comparison of the means of the sample with those for the whole area given by Coon, *Races of Europe*, p. 257, Table I.

It must, of course, be recognized that the findings are only valid for the present somewhat small group, and it would be interesting to have the physical types confirmed with quite different samples.

The Analysis of Measurements

Having obtained the measurements, the first stage in studying their inter-relations and groupings is by correlating them. The table of correlations with their probable errors is given for the first example, Table 2.

It is from these correlations that types, if present, are to be demonstrated by the device of factor analysis. Details of technicalities of procedure or theory need not concern us here, and those who are interested should consult any recognized general text-book.[2] The procedure used in the present analysis is Burt's 'Multiple General Factor Analysis,' details of which may be obtained from his own book.

Without attempting to give the theory of factors, interpretations of which, are in any case, still highly controversial, it may be helpful for those without any previous knowledge to mention a few of its assumptions and aims. The first assumption of correlation is that a positive correlation between two variables, *e.g.* two traits, can be accounted for by assuming a common basis or 'factor.' A negative correlation can be considered to indicate the presence of antagonistic or opposite components. This common basis may exist more or less generally through a whole table of inter-correlations. It is one of the aims of factor analysis to partition the table of correlations into such components of greater or less extent and to assess the amount contributed by each of these factors to the total correlation. The factors so extracted may then be used to form a basis of classification, *e.g.* into types.

From the fact that all the significant correlations are positive we infer that a greater than average development of any one trait in a person is in general accompanied by a greater than average development in the other traits for that person. The only types which would appear to be indicated, therefore, comprise those individuals who are either generally large or generally small. We are not, however, primarily interested in size,

[2] *E.g.*, Spearman: *Abilities of Man*. Thurstone: *Vectors of the Mind*. Thomson: *Factorial Analysis of Human Ability*. Burt: *Factors of the Mind*.

TABLE 1.—MEANS, STANDARD DEVIATIONS, AND COEFFICIENTS OF VARIATION OF THE TRAITS

	Present sample, mean	Coon's figures, mean	Standard deviation	Coefficient of variation
	mm.	mm.	mm.	
Stature	1719	1729	63·5	3·70
Sitting height	910·5		35·5	3·86
Shoulder breadth	389·1	390	24·7	6·34
Hip breadth	307·5		28·2	9·18
Span	1768	1800	76·9	4·35
Chest breadth	288·9		30·7	10·64
Chest depth	228·1		29·4	12·88
Head length	197·8	190	6·38	3·23
Head breadth	153·5	154	4·98	3·22
Head height	137·2	125	5·66	4·06
Hand length	189·9		9·66	5·09
Hand breadth	89·2(5)		5·08	5·69

N.B.—Head height is not comparable for the present data and Coon's figures because of a difference of measuring technique.
The next highest discrepancy is that in the means for span. This trait has the largest standard deviation so that the variability for the sample means will tend to be greatest.

TABLE 2.—NORTH IRELAND DATA. ORIGINAL CORRELATIONS WITH THEIR PROBABLE ERRORS

	1	2	3	4	5	6	7	8	9	10	11	12
1. Stature	—	·716	·235	·269	·811	·211	·057	·248	·038	·088	·689	·411
2. Sitting height	·716 ·033	—	·230	·230	·514	·288	·114	·163	·018	·159	·552	·150
3. Shoulder breadth	·235 ·064	·230 ·064	—	·337	·409	·483	·309	·190	·063	·062	·303	·282
4. Hip breadth	·269 ·062	·230 ·064	·337 ·060	—	·385	·534	·472	·264	·044	−·040	·331	·417
5. Span	·811 ·023	·514<·050	·409<·056	·385<·057	—	·326	·116	·217	·150	·109	·736	·514
6. Chest breadth	·211<·064	·288<·062	·483<·052	·534<·048	·326<·060	—	·364	·328	·133	−·019	·295	·365
7. Chest depth	·057<·067	·114<·067	·309<·061	·472<·052	·116<·067	·364<·058	—	·095	·036	−·032	·104	·260
8. Head length	·248<·062	·163<·066	·190<·065	·264<·062	·317<·065	·328<·060	·095<·067	—	·318	·316	·219	·163
9. Head breadth	·038<·067	·018<·067	·063<·067	·044<·067	·150<·066	·133<·066	·036<·067	·318<·061	—	·351	·228	−·008
10. Head height	·088<·067	·159<·066	·062<·067	−·040<·067	·109<·067	−·019<·067	·032<·067	·316<·061	·351<·059	—	·114	·027
11. Hand length	·689<·034	·552<·047	·303<·059	·351<·059	·736<·034	·295<·062	·104<·067	·219<·064	·228<·064	·114<·067	—	·631
12. Hand breadth	·411<·058	·150<·066	·282<·056	·417<·056	·514<·048	·365<·058	·260<·065	·163<·066	−·008<·067	·027<·067	·631<·041	—
1st Factor saturations	·807	·558	·514	·600	·783	·606	·336	·433	·234	·204	·770	·550

TABLE 3.—HIERARCHY OF FIRST FACTOR AND FIRST RESIDUALS

	1	2	3	4	5	6	7	8	9	10	11	12	
1. Stature	—	·389	·358	·418	·546	·422	·234	·302	·163	·142	·537	·383	
2. Sitting height	+·327	—	·287	·335	·437	·338	·187	·242	·186	·113	·430	·307	
3. Shoulder breadth	−·123	−·057	—	·308	·402	·311	·173	·223	·120	·105	·396	·283	H
4. Hip breadth	−·149	−·105	+·029	—	·470	·384	·202	·260	·140	·122	·462	·330	E
5. Span	+·265	+·077	+·007	−·085	—	·474	·263	·339	·183	·160	·603	·431	A
6. Chest breadth	−·211	−·050	+·172	+·170	−·148	—	·294	·262	·142	·124	·467	·333	D
7. Chest depth	−·177	−·073	+·126	+·270	−·147	+·160	—	·145	·079	·069	·259	·185	C
8. Head length	−·054	−·079	−·033	+·004	−·122	+·066	−·050	—	·101	·088	·333	·238	E
9. Head breadth	−·125	−·108	−·057	−·096	−·033	−·009	−·043	+·217	—	·048	·180	·129	T
10. Head height	−·054	+·046	−·043	−·162	−·041	−·148	−·101	+·228	+·303	—	·157	·112	
11. Hand length	+·131	+·122	−·093	−·111	+·133	−·172	−·155	−·114	+·048	−·043	—	·424	
12. Hand breadth	+·028	−·137	−·001	+·087	+·083	+·032	+·015	−·078	−·137	−·085	+·207	—	
	FIRST RESIDUALS												
Saturations	·697	·558	·514	·600	·783	·606	·336	·433	·234	·204	·770	·550	

TABLE 4. RE-ARRANGED FIRST RESIDUAL CORRELATIONS WITH THEIR PROBABLE ERRORS

	1	2	3	4	5	6	7	8	9	10	11	12
1. Hand length	—	+·151 ·066	+·133 ·066	+·122 ·066	−·114 ·066	−·043 ·067	+·048 ·067	+·207 ·065	−·093 ·067	−·155 ·066	−·172 ·066	−·111 ·066
2. Stature	+·151	—	+·265 ·063	+·327 ·060	−·054 ·067	·054 ·066	−·125 ·066	−·028 ·067	−·123 ·066	−·177 ·066	−·211 ·064	−·149 ·066
3. Span	+·133	+·265	—	+·077 ·067	−·122 ·067	−·051 ·067	−·033 ·067	+·083 ·067	+·007 ·067	−·147 ·066	−·148 ·066	−·083 ·067
4. Sitting height	+·122	+·327	+·077	—	−·079 ·067	+·046 ·067	−·168 ·066	−·157 ·066	−·037 ·067	−·073 ·067	−·050 ·067	−·105 ·067
5. Head length	−·114	−·054	−·122	−·079	—	+·228 ·064	+·217 ·064	−·075 ·067	−·033 ·067	−·050 ·067	+·066 ·067	+·004 ·067
6. Head height	−·043	−·054	−·051	+·046	+·228	—	+·303 ·061	−·085 ·067	−·043 ·067	−·101 ·067	−·143 ·066	−·162 ·066
7. Head breadth	+·048	−·125	−·033	−·168	+·217	+·303	—	−·137 ·066	−·057 ·067	−·043 ·067	−·009 ·067	−·096 ·067
8. Hand breadth	+·207	+·028	+·083	−·157	−·075	−·085	−·137	—	−·001 ·067	+·015 ·067	+·032 ·067	+·087 ·067
9. Shoulder breadth	−·093	−·123	+·007	−·057	−·033	−·043	−·057	−·001	—	+·136 ·066	+·172 ·066	+·029 ·067
10. Chest depth	−·155	−·177	−·147	−·073	−·050	−·101	−·043	+·015	+·136	—	+·180 ·066	+·270 ·064
11. Chest breadth	−·172	−·211	−·148	−·050	+·066	−·143	−·009	+·032	+·172	+·180	—	+·170 ·066
12. Hip breadth	−·111	−·149	−·083	−·105	+·004	−·162	−·096	+·087	+·029	+·270	+·170	—
2nd Factor saturation coefficients	·201	·397	·189	·254	·051	·327	·190	−·084	−·242	−·474	−·422	−·445

TABLE 5.—HIERARCHY OF SECOND FACTOR AND SECOND RESIDUALS

	1	2	3	4	5	6	7	8	9	10	11	12	
1. Hand length	—	+·080	+·036	+·051	·010	·066	·038	−·017	−·048	−·095	−·085	−·089	
2. Stature	+·071	—	·071	·101	·020	·129	·075	−·033	−·095	−·188	−·169	+·176	
3. Span	+·097	+·194	—	·046	·009	·059	·034	−·015	−·043	−·085	−·076	−·080	
4. Sitting height	+·071	+·220	+·031	—	·013	·083	·048	−·021	−·061	−·120	−·108	−·113	Hasse Accuv
5. Head length	−·124	−·074	−·131	−·092	—	·016	·010	−·004	−·012	−·024	−·021	−·022	
6. Head height	−·109	−·183	−·110	−·037	+·212	—	·062	−·027	−·078	−·155	−·138	−·145	
7. Head breadth	+·010	−·200	−·067	−·216	+·207	+·241	—	−·016	−·046	−·090	−·081	−·084	
8. Hand breadth	+·224	+·061	+·098	−·136	−·071	−·058	−·121	—	·020	·040	·036	·037	
9. Shoulder breadth	−·045	−·028	+·050	+·004	−·021	+·023	−·011	−·021	—	·114	·102	·107	
10. Chest depth	−·060	+·011	−·060	+·047	−·026	+·054	+·047	−·025	+·022	—	·201	·210	
11. Chest breadth	−·087	−·042	−·072	+·058	+·087	−·065	+·072	−·004	+·070	−·041	—	·188	
12. Hip breadth	−·022	+·027	−·005	+·008	−·026	−·017	−·012	+·050	−·078	+·060	−·018	—	
	SECOND RESIDUALS												
Saturations	·201	·397	·189	·254	·051	·327	·190	−·084	·242	−·474	−·422	−·445	

TABLE 6.—REARRANGED SECOND RESIDUALS WITH THEIR PROBABLE ERRORS

	1	2	3	4	5	6	7	8	9	10	11	12
1. Head breadth	—	+·207 ·065	+·241 ·064	+·047 ·067	−·072 ·067	−·011 ·067	−·012 ·067	−·121 ·066	+·010 ·067	−·067 ·067	−·200 ·065	−·216 ·065
2. Head length	−·207	—	+·212 ·065	−·026 ·067	+·087 ·067	−·021 ·067	+·026 ·067	−·071 ·067	−·124 ·068	−·131 ·068	−·074 ·067	−·002 ·067
3. Head height	+·241	+·212	—	+·054 ·067	−·005 ·067	+·035 ·067	−·017 ·067	−·058 ·067	−·109 ·067	−·110 ·067	−·183 ·065	−·037 ·067
4. Chest depth	+·047	−·026	+·054	—	−·041	+·022 ·067	+·060 ·067	−·025 ·067	−·060 ·067	−·062 ·067	+·011 ·067	+·047 ·067
5. Chest breadth	−·072	+·087	−·005	−·041	—	+·070 ·067	−·081 ·067	−·004 ·067	−·087 ·067	−·072 ·067	−·042 ·067	−·058 ·067
6. Shoulder breadth	−·011	−·021	+·035	−·022	+·070	—	−·078 ·067	−·021 ·067	−·045 ·067	+·050 ·067	−·028 ·067	+·004 ·067
7. Hip breadth	−·012	+·026	+·017	−·060	−·018	−·078	—	+·050 ·067	−·022 ·067	−·005 ·067	+·027 ·067	+·008 ·067
8. Hand breadth	+·121	−·071	−·058	−·025	−·004	−·021	+·050	—	+·224 ·064	+·098 ·067	+·061 ·067	−·136 ·066
9. Hand length	−·010	−·124	−·109	−·060	−·087	−·045	−·022	+·224	—	+·097 ·067	+·071 ·067	−·071 ·067
10. Span	−·067	−·131	−·110	−·062	−·072	+·050	−·005	−·098	+·097	—	+·194 ·065	+·031 ·067
11. Stature	−·200	−·074	−·183	+·011	−·042	−·028	+·027	+·061	+·071	+·194	—	+·220 ·064
12. Sitting height	−·216	−·002	−·037	+·047	+·058	−·004	+·008	−·136	+·071	+·031	+·220	—
3rd Factor saturations	·469	·357	·415	·029	·123	·074	−·033	−·219	−·326	−·306	−·436	−·156

but in types which imply opposites due to differential development, such that over-development in one trait, *e.g.* stature, is accompanied by under-development in another, *e.g.* waist, for one type and the reverse in the other type. In order to show such a tendency we have to eliminate what is common or general to all the individuals which is obscuring the antagonistic impulses which may be operating in addition. The accepted procedure is to subtract the amount of correlation due to this first or general factor in the form of a 'hierarchy' shown in Table 3. If we accept this step on trust, we are then left with remaining (technically known as 'residual') correlations shown in Table 3 (lower portion) or shown fully in Table 4. Using Burt's procedure these residual correlations may be made to show the polar opposite components (hence termed 'bi-polar' factors) necessary as the basis of complementary types. It will be seen that the coefficients are mainly positive in the N.W. and S.E. quadrants and negative in the S.W. and N.E. ones. This implies, as we have seen, that the traits, stature, span, sitting height, hand length, and the head measurements being positively correlated, have a common basis and form a group. Similarly, the breadth measurements, with chest depth, form a group correlating positively among themselves. The inter-correlations between members of one group and the other are negative, indicating that the factors or bases concerned in them are of opposite kind. Since the traits form two groups, the persons in whom they are measured must fall into two groups or types according to which principle, breadth or length, predominates.

The figures at the foot of Tables 4 and 5 indicate the degree to which the measurements are permeated or 'saturated' with the factors; hence being termed 'saturation coefficients.' Expressed in another way they indicate the diagnostic value of the individual measurements.

In the same way that the general factor was eliminated in the form of the hierarchy, so the second factor hierarchy may be removed, and new residuals may be treated in the same way to produce an additional pair of opposing types. The composition of the traits in terms of the general and the two type factors is as follows :—

TABLE 7.—FACTORIAL COMPOSITION OF THE MEASUREMENTS

	Factor 1 (general)	Factor 2 (body type)	Factor 3
Span	783	180	—·306
Stature	·697	·397	—·436
Sitting height	·558	·254	—·158
Hand length	·770	·201	—·326
Head ,,	·433	·051	·357
Head height	·204	·327	·415
Head breadth	·234	·190	·489
Hand ,,	·550	—·084	—·219
Shoulder ,,	·514	—·242	·074
Hip ,,	·600	—·445	—·0323
Chest depth	·336	—·474	·029
Chest breadth	·600	—·422	·123

Nature of the Factors

Factor 1.—*The General Factor for Physical Measurements*

This factor may be identified as a factor for growth of physical structures. It will determine the size which these various organs will attain.

The correlations indicate how far development in one structure is associated with a corresponding increase in other structures. From the saturation coefficient of any measurement for this factor we can say how far the measurement represents a good indication of the general size. From the point of view of growth potential we may say that the saturation coefficient indicates how far this growth (which will have its effect in the organs in differing amounts) is active in the particular structure in question. Huxley has already drawn attention to this differential growth in his book *Problems of Relative Growth*. The 'growth energy' could be identified with the physiological processes concerned in cell multiplication under the stimulation of endocrine secretions. The saturation coefficients show that of the measurements taken span is the most highly permeated with this factor, with the other measurements concerned with the long bones also highly represented. This might indicate that the extent of growth was concerned with the age at which all the epiphyses ossify, in addition to the influence of the glands. However, the very high saturation of the hand measurements with the general factor raises additional problems. It is interesting to note that a table of physical measurements given by McDermel and quoted in Spearman *Abilities of Man*, p. 141, when analysed, gives the greatest general-factor saturation in the case of foot measurements, which tends to support these findings. The mechanism involved would appear to be the secretion of the anterior lobe of the pituitary acting after puberty. When excessive this leads to the well-known condition of acromegaly, in which the appendages, hands, feet, jaws, and possibly other skull dimensions, are disproportionately developed.

The growth of the long bones before puberty is also identifiable with the action of this gland. This would account for the high saturation values for stature, etc., already mentioned. The problem of the transition from the one mechanism to the other at puberty is interesting, and it is noteworthy that Kretschmer, *Physique and Character*, gives examples of males having hypo-activity of the sex glands and developing long limbs in consequence, without a corresponding increase in breadth. Haddon also refers to this retardation of maturity as being responsible for excessive stature; *Races of Man*, p. 9. Thus in the cases considered we evidently have a disbalance with a prolonged pre-pubertal condition. To throw light on this particular problem of the expressions of pituitary action would need successive measurements of the same individuals. However, insufficient is known of the interaction of the endocrine glands to make the interpretations of the kind suggested anything more than tentative.

Factor 2

If we wish to give a name to this factor which has two aspects such that the name covers both, we could not do better than adopt Holzinger's non-committal term 'body type' factor. The two principles correspond to growth in length and growth in breadth and depth respectively.

The individual types might be termed 'dolicho-morphic' and 'brachy-morphic' after E. Miller.

The measurements of the table fall into the two categories with only the head measurements failing to conform. All the head dimensions are

contained in the one group of measurements representing growth in length. One might naturally expect that a group factor linking the head measurements would overshadow any dichotomy within them. As one would expect, too, the head measurements with their generally low correlations, could hardly be highly diagnostic of any general body factors.

The highest positive saturation is given by stature, whilst the highest negative saturation is that due to chest depth followed by hip breadth. The dichotomy between the length and breadth or (since chest depth is included) radial measurements, is most marked. One could say that when the general factor is eliminated, strong development of any one of the long bones will tend to have a correspondingly good development of the others with, in addition, a less than average development of the radial dimensions. One might describe the effect as one of interference, whilst remembering, of course, that such an effect will only operate after the general factor which determines growth in all directions, has been allowed for. The tendencies for the two relative growths are so markedly present that we can recognize the short-limbed, broad-bodied, and probably rotund type as opposed to the relatively flat-chested, long-limbed, and narrow 'lanky' type. In so far as this is the case, the data support several well-known type theories based on the same dichotomy, *e.g.* Kretschmer's system mentioned earlier (*cf.* footnote 1).

Factor 3

Any interpretation of the nature of this factor must be tentative as the level of significance is so low. The head measurements form a group, probably due to the racial composition of the sample with its large average head measurements. The length measurements also form a group, but the rest of the residual correlations are so low as to imply that the collection of measurements into two opposed groups is due to the method of analysis rather than to any inherent tendencies.

A Welsh Sample

In order to afford some partial confirmation of the groupings of measurements to form the basis of types we may briefly consider Fleure's data and their analysis. Only the original table of correlations with their probable errors, together with the results of the analysis, are given this time, as the method of analysis is precisely the same as before. Table 8 shows the correlations.

TABLE 8.—WELSH SAMPLE. ORIGINAL CORRELATIONS AND THEIR PROBABLE ERRORS

	1	2	3	4	5	6	7	8
1. Head circumference	—	·844 ·021	·523 ·078	·471 ·083	·567 ·072	·339 ·094	·187 ·103	·221 ·101
2. Head length	·844	—	·385 ·091	·456 ·084	·434 ·087	·210 ·102	·178 ·103	·196 ·103
3. Head breadth	·321	·385	—	·152 ·103	·668 ·059	·238 ·101	·202 ·102	·248 ·100
4. Face height	·471	·465	·192	—	·289 ·096	·065 ·106	·078 ·106	·172 ·103
5. Face breadth	·567	·434	·668	·289	—	·449 ·085	·323 ·094	·362 ·093
6. Arm breadth	·339	·210	·238	·065	·449	—	·616 ·068	·652 ·061
7. Leg breadth	·187	·178	·202	·078	·323	·616	—	·707 ·055
8. Stature	·221	·196	·248	·172	·362	·652	·707	—
1st Factor saturations	·771	·844	·573	·383	·754	·599	·530	·602
2nd Factor saturations	—·457	—·403	—·216	—·285	—·117	—·459	+·556	+·548

Factor 1.—The first or general factor is of the same nature as before and shows the extent of the growth influence on the various structures. The head measurements are somewhat unexpectedly highly saturated with this factor, but this is probably because the general factors extracted involves the group factor for head measurements. Of the length measurements stature is the most highly saturated (·602); *cf.* (·697) in the North Ireland sample.

Factor 2.—For the second factor we have length measurements forming one group in contradistinction to the head and face measurements. The bipolar factor here has one principle which corresponds to the length measurements of the type factor in the previous analysis, but as there were no breadth measurements to balance these in this case the head measurements took their place instead of, as before, appearing in the third factor to be extracted.

In so far as the new data allow comparison to be made they have confirmed the presence of a positive factor for size acting throughout all the measurements and influencing their development. Moreover, there has again been a tendency for the long bones to develop in conformity with each other, so forming the basis of long and short types irrespective of the general size of the individual. The head measurements again react as one group or unit.

Summary and Conclusion

This paper has attempted to show that a type need not be a purely hypothetical or arbitrary concept dependent upon the whim of the observer, but something capable of objective measurement. In order to fulfil this condition it is claimed that a factorial analysis is necessary. Moreover, to show how the technique is capable of demonstrating the presence of types under actual working conditions, a table of physical measurements for a hundred individuals has been analysed. The measurements have been shown to demonstrate the presence of two very well marked complementary physical types, the relatively tall-, lean-, and long-limbed individuals, on the one hand, and squat-, stocky-, and short-limbed and rotund individuals on the other, this purely statistical analysis supports, physiological as well as anatomical evidence from other observers. It is hoped that confirmation of the above types with larger numbers and more diverse material will be forthcoming. In view of the size of the present sample the conclusions reached here must be generalized with extreme caution.

In addition to providing the type basis the factorial technique is also able to demonstrate the degree of type conformity in any individual. This, however, represents a somewhat different problem involving the correlation not of traits but of persons.

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Professor Burt, under whose guidance and with whose help the original research was carried out. I would also like to make it clear that although his methods have been used, this does not mean that Professor Burt accepts any responsibility for the results of this application of them or that he necessarily agrees with the general remarks on the functions and aims of factor analysis as expressed here.

Finally, I would like to thank Mr. E. G. Bowen, M.A., for his interest and very helpful suggestions in the re-drafting of this paper from the original research.

SORCERY AS A PHASE OF TARAHUMARA ECONOMIC RELATIONS. *A paper presented before the Central States Conference of the American Anthropological Association, Minneapolis, 9–11 May, 1941. By Dr. Herbert Passin, Department of Anthropology, North-Western University, Illinois, U.S.A.*

In this paper I wish to establish a hitherto unreported relation in a series of apparently discrete phenomena in Tarahumara economic life. Each of the separate items is well reported from other areas, and is common in ethnographic currency. But the correlation of these around the fundamental notion that sorcery, in one of its aspects, is a technique for the expression of hostility, is, I believe, new. However, it is fair to add that even in this linkage of well-known

phenomena into a new series, the central idea itself is not new, as witness the statement of Whitman in reference to the San Ildefonso of New Mexico:

> The notion of its prevalence [sorcery] was, I think, the expression of hostility and insecurity in a society in which aggression and violence were tabu. Each man and woman thought of his neighbours as a potential enemy.[1]

A brief caution is necessary. The material on which this paper is based is not, in the opinion of the author, adequate for complete reliability. It is derived from a relatively small sampling, studied very late in the field trip, when the crust of concealment was at long last breached. Its strength lies mainly in the extraordinary consistency of the pattern throughout all of the evidence, whether verbal or observed, and its ability to explain all the relevant data. No contrary cases appeared. However, the hypothesis still remains to be definitively proved, or disproved, in some future field-study.

Obviously in a short paper, the full grounds of evidence can only be touched, not set forth in their entirety. But it is hoped that these will prove suggestive and provocative.

The proposition offered for consideration is as follows. In present-day Tarahumara society there is a strong obligation to share goods with neighbours and relatives. The sanction underlying the cultural regulation is the fear that should one refuse to share with a person, this latter will bewitch him and eventually cause him to die. At the same time, for a wide variety of reasons, many persons do not wish to share. As a consequence, a great deal of fear and mistrust is generated, and it is commonly directed precisely against people who may have been affronted by a refusal to share. As a corollary of the above, and at one remove, it is suggested that in all cases of covetousness and desire for another's property, sorcery will be expected.

Let us now examine each of the variables in terms of our field notes, and assess the manner in which they involve sorcery within the community.

1. Ideally, in Tarahumara society, there is a neat and delicate balance between the prestige derived from wealth and the obligation to share which runs alongside. But the constant encroachments of a mestizo mass on the whole range of Tarahumara economy has rendered wealth increasingly insecure, and the balance has been disrupted in such wise that men tend to value the prestige less than they fear its concurrent obligations.

The statement that everybody should share with everybody else is so widely encountered, that at first blush one is inclined to accept it as a true statement of a definitive structural feature of Tarahumara reciprocal economic practice. No one, for example, would eat in the presence of others without first seeing that the guests were properly provided with food. If a man does not have enough to pass around, he simply does not eat. If he has not enough cigarettes, he goes without them himself. When people are in need, they commonly betake themselves to some more fortunate relative or neighbour and are granted loans or even outright gifts of food, land to cultivate, fertilizer, and animals.

But on closer acquaintance with actual community life, one begins to become aware of the fact that techniques of circumvention of the obligation are equally widespread. An example from Malinowski may serve to illustrate the trend of such evasion:

> Soon after I arrived in Omarakana in 1914, the paramount chief, To'uluwa, became aware of the need for a new three-tiered basket. . . . Their use to a man of high rank is double: on the one hand their three-fold construction symbolizes wealth and plenty. But furthermore the three low cylinders can be placed one into the other, so that only the contents of the topmost are visible. And this is very useful, as the chief can put away into the lower compartments his stores of tobacco or betel-nut. If these were exposed to the public gaze, he would, on the principle of *noblesse oblige*, have to distribute them among the surrounding people.[2]

The evasion of *noblesse oblige* among the Tarahumara takes myriad forms of concealment. Most people have secret storehouses, so well-hidden that it is indeed difficult to locate them. Thus prying neighbours and relatives are prevented from discovering the true extent of a man's possessions. Everybody is secretive about economic matters. For the field anthropologist, it is an arduous task to make even routine economic inquiries: to discover the number of fields a man possesses, the size of his harvest, his money supply, indeed anything which might provide his neighbours with an idea of his wealth.[3] Bennett has reported a common type of occurrence.[4] One of his informants used to go two miles down the river to slaughter a hog so that his neighbours should not know about it. Many

people also go to market their harvests secretly, starting out and returning in the dead of night. It is also common for persons who are not precisely poor to disguise themselves by wearing old and tattered clothing, living in tumble-down houses, and in other ways concealing their affluent status.

The consequences of this ceaseless strain on the cultural regulation are to be found in the daily burden of gossip, slander, and bickering, which has been noted by various observers. Lumholtz, in 1889, noted: "They are very critical one "with the other, and a great deal of gossip goes "on."[3] More reliable along these lines are the statements of more modern workers, like Bennett and Zingg. Zingg, in comparing the pleasantness of Huichola daily life with that of the Tarahumara,[4] speaks of the constant suspiciousness of the latter; and in another place[5] suggests that nowadays there is a feeling that all one's neighbours are enemies and evil-doers, and are hence suspected of sorcery.

Most sorcery is worked by 'thinking evil' of a person, although more specific practices and counter-practices are known. The evil-doer thinks evil of a person, and when that person sleeps, goes to him in a dream, seizes his soul, and "the man dies right away" (*luego, luego, se muere el hombre*). In this connection, the case of Josesito, chief of the Tarahumara of the southern part of the Alta Tarahumara, is particularly illuminating. During most of my stay, Josesito believed he was bewitched. Although he refused for a long while to acknowledge any known reason for his bewitchment, one day in a mood of bitterness he confided that he was bewitched because people hated him. I continue with the following notes from my field diary:

> He said there were many, many people all over who were his enemies. In Rancherías, Pino Gordo, Tierras Verdes, and other places there were many enemies. And even right here in Guachochi there are many people who hate him.

Further in the discussion, after we had talked about 'thinking evil,' he burst out:

> "Yes, that's how it is. They think evil of me." *Sí, así es. Ellos piensan mal de mí.* He said people thought evil of him because they were jealous of him.

Another person, speaking of someone who died of bewitchment, said:

> "They had ill-will against him." (*Le tenían la mala voluntad.*)

Now, while it is apparent that the *mala voluntad* can refer to many different situations of jealousy, conflict, and dislike in interpersonal relations, I am suggesting here that the particular conflict under consideration provides the basis for a good deal of ill-will and fear of sorcery. In his elliptical way, Josesito touches the real issue. Let us turn to our field notes once more:

> He was bitter over the ill-feelings visited upon him, and which had brought about his bewitchment. He pointed out how much he does for them, how much he is always giving to people in goods, counsel, and time. But they are always wanting things *from* him, and when he can't oblige them, they hate *him*.
>
> They're *jealous of* him because he's a hard worker and they don't know how to work. They don't understand that he has a large family to support, and that he is always having to give out things. So he has many enemies right here in the pueblo.

The phrases, 'hard worker' and 'they don't know how to work' should not be misleading; they are only euphemistic ways for saying that Josesito is rich and the others are poor.

Implicit in the central proposition of this paper was the notion that the wealthier people would have the most to fear, the greatest call to share, and would hence, presumably, do most of the concealing. In Josesito's case this is markedly true, for he was clearly the wealthiest man in Guachochi, and as chief of some twenty pueblos was under the obligation to share widely, even acting as resident host for Tarahumara travellers who came to, and through, Guachochi for counsel and advice. At the same time, Josesito was a harassed man, constantly bewitched, fearing people, and the target of a great deal of miscellaneous hostility. It is interesting in this connection to note that Josesito said that sorcerers were always poor men, not rich ones.

The almost compulsive fear on the part of those who do not share may be referred back to the dread sorcery sanction which enjoins it. As it was phrased to me by the aged shaman, Jacinto:

> When a person is eating something *sabroso* (savoury), and doesn't share it with someone who happens by, the latter will kill him.

And one of the therapeutic techniques in case of bewitchment is to leave some food outside of the house as an offering, so that the sorcerer or his evil bird-creature may find it, be satisfied, and withdraw the spell. That, correlatively, guilt feelings are involved is strongly suggested.

2. We do not have to go far afield to find the continuous strand of experiences leading from the invocation of sorcery when one does not share, to the use of sorcery in more generalized situations of jealousy and economic hostility. To be sure, all jealousy is fraught with hate, and consequently with sorcery. And it is, indeed, a fundamental element in conflicts over women, revenge, etc. But here we are concerned with the respects in which sorcery operates as a result of economic conflicts.

> "When a man wants the land of another," says Jacinto, "he will try to kill him."
>
> "When I have animals and another man wants them" (the exact words were: *echa los ojos a mis animales*), "he kills me."
>
> "They kill for whatever they want and another refuses to give them."

And since women too are property-owners and not immune from economic covetousness, there are female sorcerers and according to Jacinto, it is "For lands they kill too" (*Por tierras ellas matan también.*) Thus there is a disposition to regard any person with whom one has an economic dispute as a potential sorcerer, and to fear evil from that source. It is even likely that one might impute such motives to a person with whom one is not friendly, a person, for example, about whom one feels guilty for not having shared. The crucial statement that "so-and-so *wants* "something from me, and I can't give it to him," is suggestive in this regard. José Peña of Pino Gordo was bewitched, according to his statement, by one Serbando José of Téwatipa, a neighbouring *ranchería*. From my field notes, he opens with an argument similar to that of Josesito:

> Serbando José (who is a sorcerer) wanted to borrow things from him, because the latter has many cows, etc.; but José Peña needed them himself and wouldn't give them away. For this reason, Serbando José became angry and bewitched him.

Here again, a man wants something from another, and when the latter does not comply with the request, he is bewitched. José Peña had a long-standing grievance against Serbando José and his family, because he claimed that his brother had died of bewitchment at the hands of the mother of Serbando, and that his son had been killed by Serbando himself. In commenting on this latter death, he went on to say that he and Serbando had been fighting over a piece of land and other things for years now, and that is why his son was killed and he himself is now bewitched.

3. One further set of phenomena may be placed within this framework. It has been customary to regard the tremendous dispersion of the Tarahumara and their failure to congregate in real villages as a simple consequence of the bilateral inheritance mechanism operating in a difficult natural terrain.[8] But a little thought will show that there is nothing inherent in this situation that requires such extreme dispersion as is usually found. In a group of adjoining farmsteads, for example, the houses could be close together; but in actual fact they are about as far from each other as is physically possible. Among the Ifugao, where a similar inheritance situation obtains, the natives live in real villages or clusters of houses, whence each day they set forth to work in their widely scattered fields. This type of thing would present no obstacle for the Tarahumara, who are justly famous for their extraordinary walking and running prowess. The very name, Tarahumara—or more correctly, *rarámuri*, means 'foot-runners.'

If these considerations are viewed in terms of the earlier discussion of sorcery, the suggestion arises immediately that the Tarahumara live their characteristic isolated, scattered existence, because they do not wish to live near each other. The ill-fated schemes of the missionaries at Sisoguichi and other places, as well as the more recent attempts of the Mexican school-teachers shows that there is something over and above a simple scatter effected by the prevailing modes of inheritance. Nor is it a matter of mere habitation. Lumholtz, after listing a series of obvious reasons for the constant movement of Tarahumara families, says:

> There may also be other reasons, known only to themselves, for moving, because in some parts families have been known to move their habitations ten times a year.[9]

I wish to suggest that the Tarahumara do not cluster in adjoining households and villages because of the fear of revealing their wealth to neighbours and the concurrent fear of sorcery. Thus there is an active, dynamic need for living apart which successfully frustrates the well-meaning efforts of missionaries and teachers.

4. In summary, I wish to speculate briefly as

to whether the material here presented may not be viewed in a more general light, as the exemplification of a more general process. Can it be said that in any society where there is a widespread evasion of a cultural obligation which results in the diffusion of tension and hostility between people, and further if this hostility is not expressed in overt physical strife, that sorcery or related non-physical techniques will be brought into play?

[1] Whiteman, W.: 'The San Ildefonso of New Mexico,' in *Acculturation in Seven American Indian Tribes* (ed. R. Linton), D. Appleton-Century, 1940, p. 419.
[2] Malinowski, B.: *Coral Gardens and their Magic*. London: Allen and Unwin, Ltd., v. I, pp. 40–41.
[3] *Cf.* Passin, H.: 'Tarahumara prevarication: a problem in field method,' *American Anthropologist*, forthcoming.
[4] Bennett, W., and Zingg, R.: *The Tarahumara*. University of Chicago Press, 1935.
[5] Lumholtz, C.: 'Cave-dwellers of the Sierra Madre,' *Int. Congr. of Anthrop.*, 1894, p. 106.
[6] Zingg, R.: *The Huichols: Primitive Artists*.
[7] Zingg, R.: *Reconstruction of Ute-Aztekan History*. University of Chicago Press, p. 208.
[8] *Cf.* Bennett, *op. cit.*
[9] Lumholtz, C.: 'Among the Tarahumaris,' *Scribner's Magazine*, v. 16, New York, 1894, p. 48.

AN INTERPRETATION OF THE TABOO BETWEEN MOTHER-IN-LAW AND SON-IN-LAW.

By Frederick Rose, M.A., Cantab., and A. T. H. Jolly, M.B., B.S., Melbourne: Groote Eylandt, Northern Territory, Australia.

Taboos between classificatory relatives, and between relatives by marriage, have been observed in primitive societies throughout the world. These taboos have been given various explanations, and one such explanation is that the taboos have been introduced in order to avoid incest between close relations. It must be pointed out that physiological incest between different relations is comparative, and can be estimated mathematically. It can be shown by simple arithmetic that if a man has some recessive gene, then the chances of this gene becoming apparent in the offspring, if he married his own daughter, is 1 in 8, while if his son married his daughter then the chances of the gene becoming apparent in the offspring is 1 in 16.

A taboo that has defied explanation in terms of incest avoidance is that between mother-in-law and son-in-law. Sexual intercourse with the mother-in-law is not in itself physiologically incestuous, but such intercourse gives rise to conditions suitable for the worst of incest, i.e. between parent and child (father and daughter). Amongst Australian aboriginals, a man is promised a wife usually before the girl is born; and where the sororate is practised, the sisters of a man's wife automatically pass to that man. If the man were to have sexual intercourse with the mother of his promised wife, then his wife might be his own daughter and it is to avoid this contingency that the taboo is introduced.

In the above theoretical explanation the following provisos are taken as axiomatic:—

1. That the aboriginal appreciates that the presence of men is necessary for the birth of children. This is tantamount to saying that women without men cannot produce children.

2. That the sexual act is not correlated by the aboriginal with the birth of children, mere proximity of men and women being sufficient to produce children.

3. That promiscuity of sexual intercourse occurs when no taboo or prohibition exists, with a resulting uncertainty of physiological paternity. N.B.—There is no uncertainty of sociological paternity.

4. That disparity in the ages of a man and his promised wife exists which would thus make a man and his mother-in-law potential mates.

Work by the writers amongst the aboriginals in the North and North West of Australia has entirely confirmed these provisos.

Amongst the Groote Eylandt aboriginals, the sexual act is, however, correlated in a loose way with the birth of children, and an interesting variation (or, better, vestige) of the taboo is found. The Groote Eylandt Society has patrilineal 'moieties' without 'sections' or 'subsections'. The 'moieties' are strictly exogamous. A woman may be (and usually is) promiscuous with the men of the opposite 'moiety,' but promiscuity within her own 'moiety' is punishable by death. It is not unusual for a woman

aged thirty or so to have been wife to four or five men who may still be living, not to mention a dozen or more clandestine liaisons. The wife of a man is called *tatanggaraka* and in regular marriages *tatanggaraka* is daughter of *tatichaka*. About 40 per cent. of the marriages are regular. All women a man calls *tatichaka* are taboo to him. In the irregular marriages the following tribal female relatives, *tunyaka* (father's sister), *datecoonaraka* (daughter), *tiaparaka* or *tartirmunjaraka* (elder and younger sister), *tatingquaraka* (sister's daughter's daughter), *tummararaka* (father's father's sister), etc., may be wife's mother, but none of these last is taboo. A man cannot have intercourse with any of these women, as they are in his own 'moiety.'

From these facts a sequence in the evolution of the Groote Eylandt Aboriginal Society may be drawn. These people were originally a matrilineal 'moiety' society, and, while they were in the matrilineal state, the taboo on *tatichaka*, who was always wife's mother, was introduced, because *tatichaka* would be in the right 'moiety' for sexual intercourse. The change to patriliny put *tatichaka* into a man's own 'moiety, and she was thus no longer available as wife. The taboo, however, still persisted. With the increase of the knowledge of paternity, the society allowed marriage with the daughters of *tunyaka*, *datecoonaraka*, etc., but no taboo was introduced, as these women were in a man's own 'moiety.'

If it can be taken that the taboo between mother-in-law and son-in-law can be correlated with a matrilineal 'moiety' system, then it may be safely inferred that patrilineal 'moiety' societies evolved from matrilineal 'moiety' societies. It would be interesting if the absence of the taboo could be correlated with the absence of the 'moiety' system. Such scanty data as are available to the writers point to the validity of this last correlation. The Andaman Islanders lack both the taboo and the 'moiety' system, so also do the Haiwaians. In Australia, on the Nullabor plains and the desert north of the plains, there are aboriginals who have no 'moiety' system, and as reported by J. R. B. Love, a missionary who has been in contact with these people for some years, have no mother-in-law taboo. An apparent exception is found amongst some of the more primitive American Indians, who have no 'moiety' system, but who do possess the taboo. These people, however, admit that they have taken the trait from their more advanced neighbours, who do have the 'moiety' system.

ROYAL ANTHROPOLOGICAL INSTITUTE: PROCEEDINGS.

Nomadism. *Summary of a Communication by Professor John L. Myres, F.B.A., 25 November, 1941.*

6 Nomadism is that mode of life in which a human community is enabled, through its control of domesticated animals, to dispense with the cultivation of plants and a place of permanent residence. Such a society can wander wherever its herds find pasture, and maintains itself with the milk and other produce of its cattle. This mode of life is normally restricted to the great grasslands of the Old World: in the New World grasslands aboriginal man failed to domesticate indigenous animals, and acquired the European horse only for use in hunting them. The Old World grasslands being traversed by the Mountain Zone, Asiatic and African nomadism must be examined separately. Their differences result chiefly from the variety of domesticable animals; horned cattle and horse being characteristic of Eurasia; sheep, goat, and ass, of Arabia; each has its own breed of camel. In Africa, where there are no wild goats nor asses nor camels, the problem of nomad origins is complicated by controversy as to the origin of the 'light' or 'thoroughbred' horse, and of African breeds of sheep and oxen.

There is also dispute whether nomadism originated within the grasslands themselves, or was propagated from adjacent forests and highlands: Menghin derives other pastoralism from the keeping of reindeer by people of his 'Bone-Culture.'

Outside the grasslands, the great mobility of nomad peoples has enabled them to penetrate into the parkland margin of the northern forests, and to traverse the Mountain Zone by certain avenues exposed during periods of drier climate. Within the high plateaux of the Mountain Zone, in Iran, Anatolia, and Hungary, immigrant nomads have created new and specialized varieties of culture, and spread also from these secondary cradle-lands.

More significant even than their mobility is the close-knit social structure and habitual discipline under experienced leadership, essential to the management and defence of flocks and herds. Sometimes in fear of drought, sometimes in pride of superior force, nomad peoples, once roused, travel far, and conquer ruthlessly: for alien man seems to

them a domesticable animal, of superior utility and intelligence, and more varied productivity. There is also inevitable antagonism between cultivators whose mode of life depends on breaking up natural vegetation to plant their crops, and pastorals to whom grassland is sacrosanct.

A further contrast is between agriculture, where the entire cycle from seed time to harvest is repeated normally and the farmer lives on what he can grow in the year, and pastoral economy, where the herd is perennially capitalized, and the owner lives on its increment, putting aside only the young animals necessary to replace losses by disease or accident. The nomad, that is, lives on income from capital, and has carried his capitalist outlook into sedentary regimes so different as those of Babylonia and Israel, India, Greece, and Rome.

The same outlook finds expression in pastoral men's treatment of their women and children. These, like the cattle, are wealth, and sure source of more wealth, for the use of their 'patriarchal' owner. This economic servitude of woman to man has characterized all cultures dominated by nomad conquerors through many generations.

Thus in pastoral society, and especially among nomad pastorals, the domestication of animals has led to the domestication of other men, and of woman by her male master; and to widespread analogies between the pastoral exploitation of cattle and other kinds of property and capital.

7 Beaten Sheet Brass, covering a Door and Pillar in the Palace of Ikerre, S. Nigeria. *By Eva L. R. Meyerowitz. Achimota, Gold Coast. Communicated* 16 *December*, 1941. *Illustrated by figure on page* 24 *below.*

In *A Bronze Armlet from Old Oyo, Nigeria* (MAN, 1941, 15) I put forward the suggestion that Old Oyo was once a centre of bronze- and brass-casting, and that it is most unlikely that the Alafin of the Yoruba who employed craftsmen of all sorts at his court, gave his orders to the workers of Ife, some 200 miles away, in order to have his bronze and brass casting executed.

Meanwhile I have found the following passages in L. Frobenius, *Atlantische Goetterlehre*:

> 'The most respected brass workers of the town came from Oyole or Oyoro, that is, the Old Oyo of the Ilorin district which was destroyed by Ghandu's Fulani. On this occasion many people fled to Ibadan, and amongst these were the most respected of the brass casters' families (p. 48).
>
> The splendour of the Royal Palace of Old Oyo is described as surprisingly rich. The swish pillars were covered with wood carvings and bronze plaques. So it is related in folklore, and the discoveries of Benin substantiate it (p. 61).'

So far no bronze plaques of any kind have yet been found, either in Old Oyo, or in any other part of the Yoruba country. We must therefore presume that bronze plaques cast in the *cire perdu* process are characteristic of Benin only.

I suspect that Frobenius received his information from an interpreter who had heard of doors and other architectural items covered with brass; but Frobenius, only knowing the Benin type of plaques, assumed that these were similar casts. In reality it is more than likely that the items, to which Frobenius refers, were sheets of brass beaten and engraved in a kind of *repoussé*, a technique which was (and still is) practised in the neighbouring Dahomey and other parts of West Africa. When applied to wood carving, these sheets were beaten and nailed on to the wood with thin wire staples made of the same metal as the sheet.

By suggesting that the plaques and other architectural details were of beaten sheet brass and not bronze or brass casts, I do not mean to say that the craftsmen of Old Oyo were not able to execute plaques, etc., in that way, but I think that the supply of bronze had something to do with it. Benin was in the unique position to obtain any amount of bronze or brass through its trade with the Portuguese, while Ife and Old Oyo had to rely on locally found material, or on metal imported from N. Africa, viâ the Saharan trade routes. Owing to this scarcity of metal it is likely that the Oyos reserved the *cire perdu* process for armlets and other smaller objects, but when they had to produce larger objects such as covering for doors and other big surfaces, they employed beaten sheet brass which is, of course, much more economical in material.

That the Yorubas were acquainted with the technique of producing *repoussé* brass and actually employed it for covering large surfaces, is evident from the attached photographs. They depict a door and an adjoining pillar, which I saw in the reception room of the Palace of Ikerre, S. Nigeria, both covered with beaten sheet brass.

REVIEWS

INDIA

8 Folk Art in Bengal. *By Ajitkumar Mookerjee. With a foreword by Sir William Rothenstein. University of Calcutta*, 1939. *Pp.xv, 50, 42 plates with photographs, coloured frontispiece, map.*

The popular art of rural India has always been something of a Cinderella, and it is certainly a promising venture to begin a study of it within the limited field of one particular province. The book is short and shows us only a small selection of Bengali folk art. In seven short chapters it deals with tradition in general, with *alipana* or floor designs drawn with rice paste, dolls and toys, painting, metal and cane work, embroidery and textiles, and minor arts. The last chapter includes masks, hanging string holders, moulds for cakes, *Lakshmi-sarā* or earthen plates with painted pictures of the goddess Lakshmi, *Manasā-ghat* or earthen pots

representing Manasā, the protectress of men from the venom of serpents, and ordinary pottery.

It must be said that the photographs are by far the more valuable part of the book. In his text, unfortunately, the author indulges too much in vague generalities and esthetic chit-chat. He touches upon a number of subjects of a wider ethnological interest, without, however, expanding on their meaning and socio-religious background.

The conventional floor designs, *ālipana*, drawn by women with a pigment of ground rice, are of two kinds. The *Lakshmi-pājē-ālipana*, regarded as holy seats of the goddess of wealth, are essentially circular and consist, it seems, only of a limited number of separate lines. This type, in spite of some differences, appears to be related to the South Indian threshold designs called *kolam* in Tamil, which are made with rice flour or some other white powder and in a continuous-line technique. The second kind are the *brata-ālipana* which consist of conventionalized representations of the sun, moon, and stars and the earth, together with various detached pictographic symbols representing deities, *sat-satin* or rival wives, cult and household objects, ornaments, etc. This type of *ālipana* has its place in a regular course of vows (*brata*) or preparatory rites, which each little girl, after the example of the goddess *Pārvatī*, is taught to perform, with the object of securing a good husband and becoming a pious and happy wife.

In the chapter on dolls and toys we are rather surprised to learn that the author has to classify all wooden sculpture as dolls, because the Bengali word for doll connotes, besides children's playthings, all kinds of carved wooden figures, cult objects as well as simple decorative carvings. Perhaps the most fascinating carvings are the old memorial posts for the dead; square, and from six to eight or more feet high, which seem to be peculiar to Bengal. The vernacular name is *brisakāṭh* (Sanskrit *vrishakāshtha*), 'bull-wood,' because a bull is figured prominently in the middle, in open-work carving, while on the base a male or female figure and in the top section a *Shiva-lingam* is generally represented. They used to be erected towards the end of a higher grade funeral ceremony (*shrāddha*), but the custom seems to be obsolete now. Two specimens are figured on Plate XIV; but it seems rather unlikely that the human figure with pyramidal head-dress from Sylhet, Assam, shown in Plate XV, is "a miniature *brisakāṭh*." Bull-posts do not seem to have attracted much attention in orientalist or anthropological literature, nor does the name occur in dictionaries. They are, however, depicted in Solvyn's etchings of 150 years ago, "Customs of the Hindoos," where the corrupt forms of the name are *bursuk-cost*, or, in the French edition, *berguecoût* (*vrisha-sātha*, 'Lord of the bull'). At Solvyn's time they seem to have been more elaborately carved as well as more frequent than nowadays. They do not seem to occur in Northern India. There is, however, a remarkable resemblance between the Bengali *brisakāṭh* and the wooden memorial-post, *māṇḍa*, of the primitive Korkus in the Satpura Range, which is erected at the occasion of the *sahdi* funeral feast. With its open-work carving and its top finished either by a dome or by a pyramid surrounded by four-pointed peaks, the Korku memorial pillar strongly suggests the shape of the bull-post, although its central feature is not the image of a bull but that of a horseman. Like the carved wooden memorial tablets and stone slabs, *pāṭā*, of the Bhil, Korku, and Gond, the *māṇḍa* pillar is most probably an adaptation of a Hindu model which has since disappeared.

In the same chapter, pith dolls are mentioned which are specially made for an almost obsolete puppet show known as "dolls' dance." Another village entertainment is a show with puppets made of palm leaves recalling the Javanese shadow-play figures. Unfortunately the author does not show us any pictures of palm-leaf puppets and leaves us altogether in the dark about the character of these primitive theatrical performances.

In the chapter on painting, we are again confronted with a primitive form of theatre, and again the author eludes our curiosity. The subjects in question are scrolls of coarse, hand-made paper painted with scenes of the popular *Krishnalīlā* and *Rāmlīlā* or other plays. The different scenes are arranged as panels one below the other. The artists of the scroll paintings, who are in their main occupation brass-workers, are known as *jādu-pātuā*, 'magic-painters.' They unroll their scrolls in shows before the public and recite the stories of the paintings while they are so engaged. The author frowns upon this recital as disturbing the appreciation of the artistic qualities of the pictures. But to all intents and purposes these shows are dramatic representations, and recital and pictures are inseparable from each other. They are obviously of the same character as the performances of the old Indian *Yamapatika* who exhibited and explained the *Yamapata* or cloth scroll with pictures of Yama, the ruler over the spirits of the dead, or as the Javanese *Wayang beber* which consists of an exhibition of a continuous series of scroll paintings accompanied by tireeal. A study of the Jādupātuā shows would be a valuable contribution to the history of dramatic art.

Mr. Mookerjee's book contains several other items of general ethnological interest. If on the whole it disappoints expectations, it is to be hoped that it will become the forerunner of more thorough and more comprehensive research into the popular art not only of Bengal, but also of other Indian provinces.

H. MEINHARD.

AMERICA

Penobscot Man. *By Frank G. Speck. Philadelphia* 1941. *(Oxford University Press.) Price* 21*s. Pp. xx.* 326*; map; illustrations.*

Professor Speck apologizes in his introduction for giving an account of the Penobscot tribe of Algonkin Indians which is obsolete in method, but such an apology was far from being required. No doubt it is true, as the author says, that modern ethnological investigation has acquired its technique through the influence of 'a much broader and deeper sophistication in the disciplines of social and psychological understanding,' but Fowler defines sophistication as involving in sophistry, which is the art of a captious or fallacious reasoner, as misleading persons by this means, as depriving of simplicity, making artificial, etc., all of which are pitfalls only too apt to betray and ensnare an ethnologist of, say, the culture-pattern school. At any rate one suspects often enough that the psychological revelation of the culture pattern to the investigating anthropologist might have presented itself quite differently to a different investigator. No such question arises in this most attractive and careful account of a North American Indian tribe in the State of Maine, and it is almost refreshing to find nearly 200 pages devoted to material culture as against 100 to social.

The culture is a hunting one, and the only husbandry consisted in cultivating a few desultory gardens for beans and corn; wild rice is gathered, not cultivated of

course, and a few indigenous tubers are grown. Canoes are made both of birch-bark and of moose-hide, but in the former the framework is inserted into the sewn-up hull, in the latter the hide is fitted on over a previously constructed frame. Fire is made with a pump-drill. There is apparently a rather remarkable bow in use in which the tension is exaggerated by a stiffish backing to the two-piece stave at the central join and braced to the opposite ends of the stave, to which it lies, as it were at a tangent, by a continuous strip of hide. It is possible that this is a modern interpretation of an account of a composite bow of walrus-ivory pieces with a sinew backing of the Eskimo type, which is recorded by tradition; the bow ordinarily used seems to be a perfectly simple bow, though an illustration (p. 59) shows one that appears partially reversed. On p. 196 references seem to occur to an illustration of types of tobacco-pipe that has not been included in the volume.

On the social side there seems to be a definite indication of the existence of exogamous and totemic groups, the totem being associated with diet, and in some cases with ancestry; modified levirate and sororate are found, and though descent is patrilineal, marriage is often matrilocal, and in such cases the maternal descent seems ultimately to prevail. Head-taking takes the place of scalping, at any rate, in some degree, and seems to be associated with marriage, as after the ceremony the groom goes off for a long hunting trip in territory which gives him the opportunity of returning with trophies of war as well as of the chase. Though it is not so stated, one may surmise that the lives taken, whether animal or human, provided him with the fertility to beget children. The superstition against enlarging a graveyard for fear of causing more deaths to fill it (p. 259) is not unique (v. Mills, *The Ao Nagas*, p. 279), and the device of obtaining a musical co-ordination approaching the effect of harmony, by different singers singing at different voice-pitches, is well known and in common usage among Assam hill-tribes.

The volume is well illustrated with plates and text-figures, the musical score of many songs is recorded, and there is a most comprehensive bibliography. An attractive postscript gives a picture of the gradual adaptation of the Penobscot Indians to the life of the present day, so vastly changed since Rosier described the tribe in the early days of the seventeenth century and still more perhaps since Nicolar's account in the nineteenth.

J. H. H.

The Folk Culture of Yucatan. *By Robert Redfield. University of Chicago Press, Chicago, U.S.A. 1941. 416 pp., 7 portraits, 12 illustrations. Price 3 dollars 50 cents.*

10 This is a comparative investigation of the present-day folk-culture of four communities in Yucatan, namely, Mérida, Dzitas, Chan Kom, and Tusik, chosen as examples of culture in a descending gradient from Mérida, the capital, to Tusik in Quintana Roo. Every department of life, except the material culture, is dealt with in each community, and the changes, and more especially the causes of these changes, are discussed in a penetrating and illuminating study. A chapter of special interest is that on the villager's view of life, with its quality of organization and inner consistency. One recalls La Farge's account of the Jacaltecs, who have a similar completeness in their outlook. There are instructive chapters on race and class, on Spanish and Indian elements, on culture organization and disorganization, on money, land, and work, and on the decline of the gods. The chapter on family organization and disorganization contains a valuable account of the kinship systems, and their differences from that of the ancient Mayn given in Eggan's study of the terms in the Motul dictionary. The author is not correct in saying that a system of sibling-exchange is alternative to one of cross-cousin marriage. Certainly sibling-exchange can coexist with a prohibition of cousin-marriage, as in both the tribes of Torres Straits; but the converse is not true, because bilateral cross-cousin marriage, which Eggan deduced from some of the Motul terms, requires sibling-exchange.

The author thinks that the absence of individual ownership of land in Quintana Roo was not pre-Columbian. But Landa expressly says that the land was held in common, so that even if there was some individual ownership of land, as Roys thinks, yet there was also communal ownership; therefore no theory is required to explain its existence in Quintana Roo.

The book throws much light on the process of culture change in general, and much of what is described finds parallels in many parts of the world today, notably the fusion of races and social classes, and the decay of authority and of rules of conduct owing to the weakening of the beliefs which upheld them, a point which was ably urged many years ago by Basil Thomson in *The Fijians*.

While such studies as the present work are valuable and necessary, one must hope that efforts will be made to rescue from oblivion the culture of the Maya and kindred races in the villages where the ancient ways are best preserved. Much money and effort have been expended on the archaeology, and rightly so, but surely the living archaeology of the present natives ought to be thoroughly studied and recorded before it is too late, both for ethnography in general, and for the understanding of the great culture of the ancient Maya, of which far too little is known. RICHARD C. E. LONG.

OCEANIA

Primitive Polynesian Economy. *By Raymond Firth. London: Routledge, 1939. 387 pp., 8 plates. Price 15s.*

11 This volume by Dr. Firth is in some sense a sequel and a supplement to his well-known work on *Primitive Economics of the New Zealand Maori*. In the present volume, however, he deals with a living Polynesian culture continuing, for all practical purposes, under its ancient isolated and autonomous conditions. All his data have had to be collected by him on the spot; the anthropologist working on primitive material cannot draw on any body of statistics for his economic conclusions, and the simple measures of demands, forces, and activities, which the economist in a mechanized society can take for granted, are denied him, while such fundamental conceptions as that, for instance, of the entrepreneur, or of private control of the means of production, are only partially valid. In such circumstances it is hardly surprising that field work in anthropology in general has been defective in analyses of the economic side of primitive life; the worker has had little to guide him, and qualitative estimates of human activity have proved easier than the quantitative ones which are really essential to economic study. What has been needed is an analysis of primitive material so treated as to provide generalizations which will fit the phenomena both of mechanized and of unmechanized communities, and afford valid deductions as to human behaviour in either type of society. It is an analysis of this kind that Dr. Firth has aimed at providing. He has succeeded extraordinarily well; one would like to see his methods applied to a primitive community in touch with

the outside world as well as to one existing in virtual isolation on an island.

Dr. Firth starts by discussing the problems of primitive economics—such problems, for instance, as whether there is any equivalent, in a community such as that of Tikopia, of value expressed in terms of money, of how far choice is determined by rational considerations and what satisfactions are aimed at to their maximum extent, of how resources are distributed, of relations between producer and consumer, and so forth. He stresses the importance of examining how the distribution of individual and collective rights in property may have affected production, and of elucidating the factors responsible for determining rates of exchange. In subsequent chapters he deals with food and population; with technique, invention, and economic lore; with labour; with ritual; the functions of chiefs; property and capital; distribution and payment; exchange and value. In a final chapter on the 'Characteristics of a 'Primitive Economy' he sums up his conclusions: problems involving the provision of material goods and questions of human welfare exist in primitive no less than in industrialized communities and are solved by an organized and intelligible system of activity; that is to say, that the principles of economics are applicable, and basic aspects of primitive economy correspond to the data of ordinary economic analysis. On the other hand, Tikopia economy at any rate is non-competitive, for competition arises in social emulation, not as economic competition *per se*. In examining the economics of a primitive society, the principle of the maximization of satisfaction is not much use; ritual needs may dictate production-effort in a field of less profit, or even the abandonment of production, and the types of satisfaction involved in such ways are really outside the scope of economic analysis. In exchange, again, the satisfaction is derived more from the act of exchange than from the result. The Tikopia native is, however, a realist and keenly alive to economic considerations, while at the same time the importance of non-economic motives suggests the interest of the modern economist of mechanized communities "in notions of an imperfect "market, in 'irrational' consumer's preferences, and in "the 'frictions' of the economic mechanism." Three appendices give a synoptic record of a Tikopian year, some linguistic categories in Tikopia distribution and exchange, and a table of exchange-rates in a culture-contact situation; and there is a bibliography and an index, to say nothing of a dozen or so admirable photographs.

Numbers of points naturally arise in the course of such a book on which a reviewer is tempted to enlarge. One would like, for instance, to discuss the psychology, familiar in primitive society, which leads to the formation of separate moral judgments upon antecedent and consequent actions which in our culture must be judged as a single transaction; one is intrigued by the right to plant coconut trees upon the land of another, though the Tikopian planter, in contrast to the Naga, for instance, retains no right of ownership in such trees; there is much to be said about the economic effects of ritual—to mention but three such points of many. There are, however, limits to a review, and it must be enough to say that Dr. Firth is to be congratulated on having provided an admirable model of how to deal with the economic life of a primitive people, an example which can be no disappointment to the many admirers of his former work on the economics of the New Zealand Maori, and a work which can and ought to be as invaluable to economists as to anthropologists. What it may lose in breadth of outlook by being confined to one island community is more than balanced by the consequent gain in objectivity.

J. H. H.

PSYCHOLOGY

The Human Mind. *By Murdo Mackenzie. London: Churchill, 1941. Price 7s. 6d.*

12 This book is written by a medical man primarily for medical people. But it would indeed be regrettable if this fact obscured its importance for sociology. Based on clinical observation, it presents a coherent theory of mind that sociologists will find an illuminating hypothesis.

Experience shows, says the author, that the mind thinks in virtue of its own inherent forces just as the heart pumps. Observation shows that the mind in prolonged conflict automatically goes into defence in one of four different ways. It may take refuge in the obsessive ritual so fully described by Freud and so successfully treated by a psycho-analytic technique. Or it may resort to the hysterical symptoms described by Janet and susceptible to treatment by hypnosis and suggestion.

But, as Jung found, there are cases of functional disorder which differ from these two, and respond to neither of the above forms of treatment. And in his *Psychological Types* he tried to describe the temperamental differences that underlie these different manifestations. Unfortunately, under his headings of extravert and introvert, which were based less on clinical observation than on the history of thought, he confused the issue by failing to distinguish between different types of temperamental force, and between all these and the neurotic rhythm of alternation between anxiety and apathy.

One of the most important contributions of Dr. Mackenzie's book is that it shows clearly the two other forms of automatic defence adopted by the mind and which he describes as depression and assertion. From the fact of these four automatic defences it appears that there are, fundamentally, four different kinds of mentality, dependent for their difference on the combination of certain temperamental forces.

The obsessive ritualist and the depressive have in common the fact that their defence is a passive retreat, seeking to damp down the intensity of the moment. They share, in fact, the temperamental force which Dr. Mackenzie calls deliberation. On the other hand, the hysteric and the assertive neurotic have in common an automatic tendency to heighten the intensity of the moment, and to assert their own importance. The temperamental force producing these reactions is called immediacy.

Deliberation and immediacy are the two forms of what this book calls temperamental pace, or the way in which the mind makes contact with things, and every mind works in terms either of deliberation or of immediacy.

But in addition to temperamental pace there is also temperamental sense of value. The obsessive ritualist and the depressive are both deliberates. But whereas the mind of the ritualist works in terms of evidence and of the concrete symbol, that of the depressive works in terms of unifying principles. The ritualist, whose delusion is, for instance, that he is an unrecognized king, points to the evidences of persecution to which an unkind world subjects him. The depressive, on the other hand, reiterates the statement of his own inadequacy:—'I am a rotter. That is why my wife has

'left me.' His own inadequacy is the unifying principle informing his pacific retreat.

In the same way the hysteric produces the concrete evidence of a paralysed limb, whereas the assertive neurotic protests the principle of his own superiority.

Ritualist and hysteric, therefore, who differ in temperamental pace, both have the same temperamental sense of value, which Dr. Mackenzie calls amplification. In the same way, the depressive and the assertive neurotics, who differ in temperamental pace, have in common the temperamental sense of value which is here called simplification, and denotes the tendency of the mind to work in terms of unifying principles. All minds work in terms either of amplification or of simplification.

It is impossible within the compass of a short review to do more than indicate the importance and interest of these temperamental forces of amplification and simplification on the one hand, and of deliberation and immediacy on the other. And indeed the book itself presents the matter in a highly condensed form which makes hard going for the reader. Those who have seen anything of the clinical work of the author know what extensive observation of fact and what wide knowledge of psychological theory lie behind this brief presentation of the author's theory of mind. Further information is given in his article: 'Jung's Contribution to Clinical Psychiatry.' (*Proc. Roy. Soc. Medicine*, XXVIII, June, 1935.)

What emerges clearly from his work is a dynamic theory of mind in which any individual mind is driven by a combination of two temperamental forces, the force either of deliberation or immediacy, plus the force either of amplification or simplification. An individual, that is to say, is either an immediate amplifier or an immediate simplifier, or a deliberate amplifier or a deliberate simplifier.

Conflict occurs if these temperamental forces are obstructed by their opposites. An immediate child may be obstructed by a deliberate parent. The inherent simplification of a mind may be blocked by an education in which amplification is the fashion. The four types of defence, into which the mind in conflict is thrown, have been the clue to the discovery of the four fundamental types of mind. And the author has found by long experience that a release of the temperamental forces through a realisation both of their inherent nature and of the nature of the obstruction restores the neurotic to mental stability. The working hypothesis, in fact, is justified by its results.

In the same way, the sociologist who applies this hypothesis to his own field of study will find much to interest and enlighten him. And the fact that, for survival reasons, certain social groups seem to tend predominantly either to amplification or to simplification explains many important phenomena, as the later chapters of this book suggest. A social group, too, though composed of immediates and deliberates, whose co-operation is essential for survival, will none the less stereotype one or other attitude of mind as the social norm. The contrast between English deliberation and French immediacy will at once spring to the mind.

It is also necessary for the sociologist to take into account the fact that all minds of whatever kind are subject to the neurotic alternation, in times of stress, between anxiety and apathy. This phenomenon of primary nervousness is widely recognized by medical experts, but sociologists will sometimes describe as 'mass hysteria' what really should be called 'mass anxiety.' One of Dr. Mackenzie's important contributions is the recognition, as apart from primary nervousness, of four definite types of secondary nervousness, the four automatic defences of the mind in conflict, which lead him to the recognition of the four mental types.

The difficulty for the reviewer is to be short without being dogmatic. All he can do is to recommend the reader to sample *The Human Mind* for himself, with the caveat that Dr. Mackenzie's terminology needs handling with some care. Words such as immediacy have their own meaning in common usage. In this book they are used in a technical sense which the author defines, but the reader none the less has to be on his guard against old associations.

The effort is well worth making. For a long time sociologists and ethnologists have looked to psychology for help. Here they will find it—and to a greater degree than is often the case. And they will not only find an indication that temperament is an essential element in social life, but they will be provided with a method by which they can handle it scientifically.

M. M. GREEN.

SOCIOLOGY

13 Æschylus and Athens: a study in the social origins of Drama. *By George Thomson, Professor of Greek in the University of Birmingham, and formerly Fellow of King's College, Cambridge. London: Lawrence and Wishart, Ltd.*, 1941. 8vo. xii+476 *pp.*, *diagrams and illustrations. Price* £1 1*s.* 0*d.*

'Not only was the Greek view of life relative,' as Professor Thomson says (p. 2) to the position of the Greek people in a Greek world, 'but so is our view of the Greek people in a Greek world.' 'Greek view.' As a foreign critic wrote of older English historians of Greece, 'Gillies wrote for the Whigs, Mitford for the Tories, Goldsmith for the ladies'; he might have added 'Grote for the Liberals, Mahaffy for Trinity College, Dublin.' In the same sense, Gilbert Murray has translated Euripides for the contemporaries of John Morley and Bernard Shaw; and Professor Thomson expounds Æschylus to those who feel that the private possession of wealth and unearned is the root of all evil. It was not ever thus, but as a boy he was shocked at the current interpretation of Greek tragedies, and the pre-capitalist society of peasant fishermen on Blasket Island,' and recent political events have forced him to 'orientate' himself. The performance, too, of a feminist play in Moscow gave him new light on Attic drama. He is already well known among scholars, for commentaries on the *Oresteia* and *Prometheus* of Æschylus—on which he has more to say here—and his present work contains much to assist and inspire students of that 'revolutionary' poet. That is, however, not the view of Æschylus familiar from the parodies of Aristophanes; but in the two generations that separate him from his Athenian critic, that 'reconciliation of opposites' in Athenian society, for which Æschylus had laboured, had been dissolved, and in face of the ruthless radicalism of Euripides he might be staged as a defender of the faith.

Greek city-states 'had advanced so rapidly that they 'carried with them copious traditions of the past.' Professor Thomson's thesis is that they carried also ritual observances, very archaic, somewhat distorted, but still competent to stimulate and 'purge' emotions, while they became the vehicle for high moral and political ideas, and great poetry. Athenian stage-conventions are indeed a remarkable instance, and much has been done already, by Jane Harrison, Ridgeway, Cornford, and Gilbert Murray, to trace these dramatic forms back to primitive conceptions and practices. On the same lines, Professor Thomson goes a good deal further; for

his analysis of Greek society in general, and especially of the earlier social history of Athens, in the light of Marxian criticism of later times, have led him to reconstruct the social and economic circumstances in which these rituals arose, and through which they came down *dishlement changés en route* into the sixth and fifth centuries, B.C. Some of this might well have been done earlier and by other hands, had not classical scholars been deterred—more by the excesses of these pioneers than by their own *bourgeois* mentality—into a narrower range of more familiar, because better established data. With some of his immediate predecessors Professor Thomson deals candidly and effectively; but his specific criticisms follow from his general position, and it is on the validity of this that the permanent utility of his work must depend, for anthropologists and classical scholars alike.

The book consists of four main parts: (i) analysis of economic and social structure of primitive tribes, and recognition of primitive survivals in early Greece; (ii) the transition from tribal society to the city-state, and the emergence both of poetry and of science in the course of the 'class-struggle'; (iii) the history of primitive initiation, in which is now detected the source of mystical religions, and especially of the Dionysiac ritual, out of which tragedy in turn arise, the under-dog in the 'class-struggle' giving tongue melodious; (iv) the specific interpretation of Æschylus as a 'revolutionary' poet with his own ideas for resolving the 'class-struggle' of his own day, followed by an outline of the fate of tragedy as a mode of artistic expression, when the political and social solution propounded by Æschylus, and momentarily effected by his generation of Athenians, had broken down, and Euripides was vocalizing new under-dogs, the slaves and the women, as Aristophanes frankly complained.

In a general discussion of ancient society it is good to be reminded of the originality and learning of Lewis Morgan, whose study of Greek tribal survivals is here disengaged both from his own mistakes and lack of material, and from the misapprehensions of critics responsible for long neglect of his work. But very much has been done, since Morgan, to clarify method as well as to supply new data; and it is here that anthropologists will ask Professor Thomson to enlarge even further the range of his enquiries, and apply severe tests of relevance to his comparisons. It is fundamental to his argument to re-examine the 'classificatory system of relationship,' and the Indo-European terms of relationship, as he does in *Appendices* I and II; seeing that the relevance of totemism, mother-right, 'and all that,' to Greek history and culture has been strenuously denied, both by some scholars and by some anthropologists. That the Greek city-states arose out of tribal societies is not disputed. The question has been, whether this or that archaic feature has been transmitted from a very primitive phase of society. Now in discussing blurred survivals of this kind it is the multitude and variety of the correspondences that carries conviction, even more than the well-characterized examples. For the latter, it might be necessary to admit convergence; for the former, to postulate a miracle, if their respective homologies are denied. This is the value, for example, of Professor Thomson's recognition in the *stichomythia* of Attic tragedy, of the mystical catechism of an initiate by his supervisor, in enigmatic speech, in the literal sense of the term. It has long been recognized that these curious dialogues were part of the traditional outfit of tragedy; that they had the form of a riddle was also known; but *why* they were perpetrated, even by so radical an innovator as Euripides, was unsuspected till Professor Thomson linked them with other ritual survivals, and thereby strengthened the case for regarding them all as such.

In support of his contention that 'the possibilities of further research in classical studies are limitless,' Professor Thomson might justly point to the long list of occasional contributions with which he has enriched his main argument. They cover many aspects of Greek culture, and are most abundant in its early phases. One might question, on p. 54, his identification of the related words *nomós* and *nómos* for different kinds of 'assignment,' in view of their respective usages in classical Greek; his recognition, on p. 80, of Homer as singing for the 'idle rich,' and Hesiod for the 'workers,' at all events without more allowance for differences of locality and date; his assumption that the Spartan *syssitia* were primitive—does not every army inevitably feed as mess-mates—; his not very clear account of party politics at Athens in the generation before the Persian Wars, an obscure topic at best. But there is nothing, even where his own convictions are most directly involved, that is not stated fairly and moderately, and with sufficient historical illustration. His book is a notable example of the contribution which modern anthropological studies have to make to traditional learning, if the learned are willing to take account of them.

JOHN L. MYRES.

GENERAL

Prehistory. *By A. Vayson de Pradenne. Translated by E. F. Row. London: Unwin, 1940. 239 pp. Illustrated. Price 6s.*

14 The news of the tragic death of Vayson came as a grievous blow to those of us who knew him and valued his special personality in the little world of prehistorians. To describe him as an amateur *par excellence* in no way belittles his worth, and indeed he had fewer than usual of the faults and more of the virtues that are proper to his kind. While much of his knowledge was lacking in detail, he had a wide vision and was always prepared to criticize usefully and trenchantly the accepted professional view of a subject.

His book is to some extent a reflection of himself. Of little use to the professional prehistorian interested in details, it will stimulate the beginner to read further. It is in places absurdly superficial and one is constantly aware of vital omissions, nevertheless it gives a not unattractive picture of the whole subject. Perhaps its most serious fault is its exclusively French outlook. The French original has a short bibliography—exclusively of French works! The translation has none at all. I am really not sure that it was worth while to make this English version, considering the number of popular books on Prehistory that have been published in this country. But I am glad, for Vayson's sake, that his name will continue to live over here, at any rate upon our bookshelves.

M. C. B.

Statistical Calculations for Beginners. *By E. G. Chambers, M.A. Cambridge University Press, 1940. viii + 110 pp. Price 7s. 6d.*

15 It is stated in the preface that "the purpose of this "book is to explain as simply as possible how to perform "the calculations involved in the commoner statistical "methods." It fulfils this purpose well, the examples being chiefly of interest to students of psychology and the biological sciences. It is one thing to apply the methods in question, and another to interpret in biological or other terms the significance of the results thus obtained. The anthropological conclusions which should be derived from the statistical reduction of

anthroponetric material are by no means self-evident, and at this stage marked divergences of treatment may be found in research publications. Anthropologists still have need of a book dealing with this topic.

G. M. M.

16 **The Durham Collection of Garments and Embroideries from Albania and Yugoslavia.** *By Laura E. Start. With notes by M. Edith Durham. Bankfield Museum Notes, Third Series, No. 4. Halifax,* 1939. *76 pp., with many illustrations. Price 2s.*

17 **Balkan Peasant Work:** Catalogue of an Exhibition of the Collection presented by Miss M. Edith Durham to the Pitt Rivers Museum, Oxford. *Compiled from the labels written by Miss Durham. Oxford,* 1941. *8 pp.*

Here is record of two sections of the remarkable collection of peasant handiwork from Balkan lands, which Miss Durham has recently distributed into permanent homes; and both catalogues are the more valuable because they are based on her own notes, as well as on the expert textile knowledge of Miss Laura E. Start, of the Victoria University of Manchester. Such a collection is unique, and can never be duplicated, because even before the present war-damage in Albania and Yugoslavia, the production of these textiles and other kinds of peasant skill was rapidly coming to an end in competition with European manufactures.

The Bankfield handbook opens with a short biography of Miss Durham, and a list of her publications. Then comes a concise historical retrospect of Yugoslavia and Albania, with a serviceable map; then notes on materials and their production, and a general account of women's costume in the central and coastal areas of Yugoslavia—skirts, embroidered sleeves, jackets, aprons, handkerchiefs and other accessories.

The costumes of Albania and southern Yugoslavia are similarly treated; in general the woman's dress is of the same type, while the men's costume offers greater interest than further north. Other special examples are Bulgarian garments from Monastir and Albanian garments from Zadrima near Scutari.

Some of the women's *jelek* jackets are very richly embroidered, like the *japanqi* cloaks which a bridegroom presents to his bride, and the most elegant garments of all, the sleeveless *giubba* coats worn indoors by women and girls of Scutari, whether Christian or Moslem; these last introduce a different note of Persian or Tartan fashion.

The head-dresses vary locally, under the three main types—a large veil of lace or muslin, a square kerchief, and a long scarf. Here, too, there is much embroidery, in similar styles.

Footwear is elaborate, because the outdoor sandal of hide is thin and does not keep out the wet; so two pairs of socks are worn, and the outer of these is decorated, because the sandals are not worn at home.

Household linen is embroidered like the clothes, and the well-defined towel-ends offer a more regular and symmetrical field for decorative designs than the skirts, aprons, and sleeves. It is here, therefore, that the repertory can be best studied, and especially the representations of flowers, birds, water-vessels, and boats.

The Pitt Rivers series consists of metal work from the same regions: necklaces and other chains, crosses and other pendants, buttons, pins, ear-rings, bracelets, belt-clasps, and the like. Much of this work is in silver filigree, and coral imitations of it. The decorative motives are an amazing jumble of many ages and styles, from neolithic to renaissance, and from mithraic to Moslem.

Though the commentary in the Bankfield handbook is elaborate on the technical side, many problems are suggested by these collections which need much comparative study before a solution can be offered. What is instructive is the fundamental continuity both with Greek costumes southward, and with Austrian, Tyrolese, Swiss, and even more northwesterly groups. The dependence of the planning and tailoring on a few simple economies of material is probably very deep-seated, and explains the resemblances between these modern survivals and the minoan dresses of the Ægean Bronze Age, recently studied by Miss Stimmy (Man, 1940, 219), though there is more to be made out on similar lines.

What needs to be determined more precisely is the relation between primary woollen garments—skirt and bodice, in general terms—and secondary clothing of linen or latterly of cotton; because the latter are essentially supplementary, intended to protect the primary garments from contact with the wearer, and to interpose a *lining* which can be sent to the wash—*mutande* in the Italian sense, while our word *lining* betrays the change of material. How the possession of such underclothes becomes a social distinction, and asserts itself extravagantly, is seen in the Greek *fustanella* and in the starched balloon-sleeves of Swiss "waitress" costumes. As Sir Martin Conway noted long ago, in his Slade lectures at Cambridge, the "new soap" of Shakespearian times was responsible for a small revolution in collars and cuffs. But in Balkan lands times have become too hard, and the remains of the linen-vogue are evanescent.

JOHN L. MYRES.

18 **Ancient Races and Myths.** *By Chandra Chakraborty. Calcutta (Vijaya Krishna Brothers),* 1941. *132 pp. Price 1 rupee.*

This is the latest of a series of popular handbooks by the same author, of which thirty-three are listed on the cover. It is claimed that this is the first attempt to "disentangle the racial components and their "contributions to Ancient Civilizations." Ancient myths are explained as based on nature-phenomena, solstices, equinoxes, and the like. Mankind is classified as Australs (Australoids), Mongoloids, Negroids, Palæ-alpines, Mediterraneans, Caspians (the "Norse giants"), and Alpines. The Aryans are a blend of Caspian and Mediterranean with Australoid and Negroid admixture, and originated in the Valdai Plateau of the Baltic region. The backward peoples will be slowly wiped out by economic pressure and replaced by blends of "superior "mesocephalics." This is all very simple; it is taken for granted in the introduction, and elaborated in a very detailed summary of the myths and religious beliefs, and also the cultures and history of ancient India (Aryavartta), Iran, Babylonia, Asia Minor (which includes Phœnicians and Hammurabi), Egypt, Latium, Hellas (where Mediterraneans were conquered by Caspians), Germania (which is supposed to be Aryan), Slavica, China, Nippon, and America. The classification, and also the order of thought, is unusual; the English and the spelling need revision; the author has read much, but does not realize how much must be omitted, if a sketch is to be also a picture.

J. L. M.

BEATEN SHEET-BRASS, COVERING A DOOR (*left*) AND A PILLAR (*right*) IN THE PALACE OF IKERRE, SOUTHERN NIGERIA
Illustrating the communication by Eva L. R. Meyerowitz, MAN, 1942, **7** (*p.* 14 *above.*)

1. THE GAME OF ZUNGU

2. WRESTLERS.

3. WRESTLERS.

4. WEAVING: *cf.* FIG. 12.

THE DAKARKARI PEOPLE OF SOKOTO PROVINCE, NIGERIA.

MAN

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ROYAL ANTHROPOLOGICAL INSTITUTE OF GREAT BRITAIN AND IRELAND

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ORIGINAL ARTICLES

THE DAKARKARI PEOPLES OF SOKOTO PROVINCE, NIGERIA: NOTES ON THEIR MATERIAL CULTURE. *By Lieutenant R. T. D. Fitzgerald of the Colonial Service of Nigeria. With Plate B and illustrations.*

19 The notes which follow were appended to a longer account of the Dakarkari pottery-fabrics, which will appear in the *Journal of the R. Anthropological Institute*. They are illustrated by the writer's sketches, and supplement in many details the summary description of P. G. Harris, 'Notes on the Dakarkari Peoples' in *J.R.A.I.*, LXVIII, 1938, pp. 113–152.

Tribal Marks

The normal tribal marks are shown in fig. 1; the chin scars are often omitted. Sometimes the temple scars are carried further over the brow and one thick scar down the centre of the forehead takes the place of the forehead scars. The scars may be either numerous and thin scars or few and thick; the former is most common. Fig. 2 is very rare. Fig. 3 is rare in men, but common with women. The upper incisors are filed to a point.

At Diri and Dirin Daji and to a certain extent at Kainya there is not much marking of faces. Instead there are small black scars on parts of the face. Such scars appear on the neck in most parts of the area, and also on the bodies of women.

A favourite with girls is the pattern in fig. 5 which is done in raised scars. This pattern is often seen done extremely neatly, and makes a very pleasing sight. The pattern appears to be done in thick lines, but is actually a series of raised dots.

Games

1. *Zungu*.—This is a game played with a board and stones and is similar to the Ibo 'Okwe' and the 'Choro' and 'Bawa' of East Africa (Pl. B, 1.).

The board consists of a log of wood with two rows of six cups cut into it, and one large cup at one end. The large cup is only used as a temporary receptacle for stones that one has 'taken.' Five stones are placed in each cup.

The start is made by one player taking all the stones out of one hole and putting them in the hole on the right: the second player does likewise. Sometimes one stone is left in the hole from which they were all taken. After the first move, all the stones from any cup on the player's side are picked up, one stone being dropped in each consecutive cup in an anticlockwise direction: a stone is always left in the cup from which the stones were taken. Single stones can be played at any time during the game—in this case it is, of course, impossible to leave a stone in the hole from which the single stone was taken. When one has played out all the stones, one takes up the stones from the hole in which the last of the stones just played had landed, and continues playing round the board, no longer leaving a stone in the cup from which the stones are taken. This goes on till the last stone lands in a vacant cup or until one has taken some of the opponent's stones. The method of taking is to make one's last stone land in a cup on one's own side of the board exactly opposite a cup containing either one or three stones, or on the opponent's side of the board immediately before such a cup: all the stones contained in this cup are taken and held in the hand, and the opponent takes up the play.

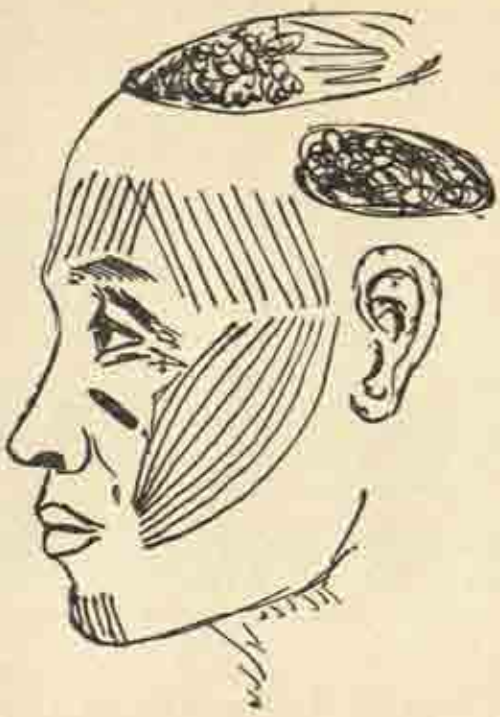


Fig. 1.

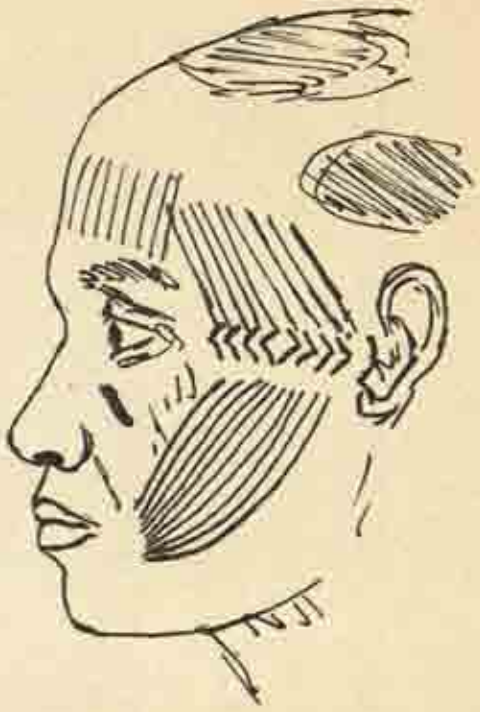


Fig. 2.

Fig. 3

Fig. 4.

Fig. 5.

In addition all consecutive 'ones' and 'threes' in the direction of play may be taken; thus, if the cup which one is taking contains 3 and the next four cups contain 3, 1, 1, 3, all of them may be taken.

All takings are kept in the hand until an opportune moment arrives when they may be "poured out," *i.e.*, played. These stones may only be played on one's own side of the board, and a circuit of the board is never made; when one reaches the right of the board one continues the play on the left of one's own side of the board, until all the stones played from the hand are finished, when one may continue circling the board in the usual manner.

One may take with a single stone; single stones may also be played from the hand.

Native expressions used in the game are :—

ka matu (you are dead) = you are as good as beaten; you are beaten;

na matu (I am dead) = I am, etc.;

za na ci wannan (I shall eat this) = I am going to take this cup;

zuba (pour out) = play the stones round the board.

I have given the Hausa words in these four expressions, as I do not know the Dakarkari words, and the men talked Hausa for my benefit.

2. *Dara.*—This game is a sort of chess and is usually played by young people.

The board consists of 30 small depressions made in the ground in five rows of six. Each player has 12 pieces: the pieces are sticks, stones, or pieces of earthenware, and each side has a different type, so as to distinguish them. The pieces are placed in the holes one at a time, the two players playing alternately. The pieces are placed with a view to the player's own advantage in the future course of the game. When all the pieces have been laid out, the second part of the game starts.

One piece is now moved at a time, the idea being to form a line of three pieces in consecutive holes either across or downwards, but not diagonally. The player who succeeds in doing this 'eats' one of his opponent's pieces and removes it from the board. The game ends when one player is unable to make any further lines of three pieces. Lines of four pieces do not count. A great deal of the skill in this game is in the original placing of the pieces. I have seen a game which was obviously won before the second play started.

3. *The Ground-Nut Pool.*—This is a game played by children. The spirit of gambling is instilled at an early age.

A small hole is made in the ground. Each player makes a contribution to the pool which is placed in the hole. On one side of the hole a ramp is made with a groove in it. The players roll two ground nuts down this groove into the hole. The idea is to hit the first nut with the second: the successful player takes the pool.

This game sounds very simple, but it is extremely difficult to hit the nut, and I have seen quite large pools accumulate. The difficulty increases as the pool gets fuller.

4. *Miscellaneous Toys.*—The hobby horse is used by children, and is composed of a stalk of guinea-corn, cut and bent.

Crude models of cars and aeroplanes are made of pith and thin stalks of guinea-corn. The wheeled vehicles are dragged around on the end of a bamboo sliver.

Miniature bows and arrows are used by boys. The arrows are tipped with a lump of wax so that they do no damage.

Musical Instruments

Dakarkari musical instruments are not of great variety. There are horns, whistles, reed instruments, and drums. I have seen no xylophones or string instruments. There are two varieties of horn: oryx horns, and smaller horns such as those of the roan. Oryx horns are imported from the north of Sokoto, or French country, for there are no oryx anywhere near the Dakarkari area. Oryx horns have a metallic sound like a trumpet, and the calls are often military. This is no doubt due to there having been a company of the Nigeria Regiment stationed at Zuru in the past. Other evidence of the military station is to be found in anklets, belts, and rattles made of cartridge clips. Oryx horns are seen in fair numbers at wrestling matches, and are used to give the signal that proceedings are starting. Smaller horns appeared to be rarer, but this may be due to their being less conspicuous. Just as there are not many buglers in England, so not all people can play a horn well. The horns are of the usual type, with the mouth-piece at the side: Oryx horns have a section of ox horn added.

The usual whistle is made out of a small calabash called *ƙokiya* in Hausa (*Strychnos spinosa*), the trees of which look like orange trees at first sight. The blowing hole is made at the point of attachment of the stalk, and three other smaller holes are made at 90° to it and from each other. According to the positions of the holes, and the fingering, quite a variety of notes can be produced. This is a very common whistle, as it can be made in a quarter of an hour.

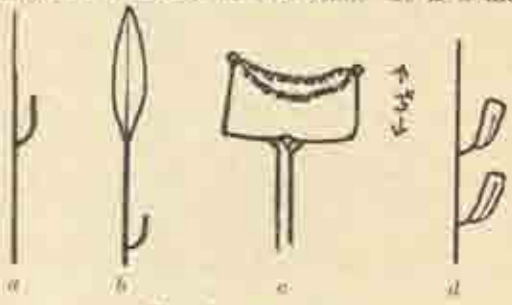
Another whistle is similar to a recorder, and produces two or three notes. It is made out of a section of corn-stalk or bamboo, about six inches long. A nick is taken out of the mouth-piece end and one or two holes are made in the side.

The reed instrument consists of a two-foot section of corn-stalk. Each end of this stalk is inserted into a loosely fitting *ƙokiya* calabash which is attached by a pin or piece of fibre. One-third of the way along the stalk an incision is made to produce a reed, and at the other end in about the same position a hole is made. Two or more notes (if there is more than one hole) can be produced. The tone of this instrument is similar to that of a horn, and carries a considerable distance, thanks to the excellent sound-boxes.

Drums similar to those prevalent all over Northern Nigeria are to be found. I have also seen drums made out of large gourds. No log drums were seen or heard of.

The Ogwop (Chief Farmer's Staff) (fig. 6)

P. G. Harris says this staff is called the *ogwop*: I have also heard it called *safo*. There are numerous varieties of this staff. It is a metal



a *b* *c* *d*

FIG. 6.—THE OGWOP.

rod from 4½ to 5 feet long with a projection on the side near the top. This projection is often in the form of a miniature hoe, but may also be a hook the same thickness as the rest of the rod. The miniature hoe naturally has a symbolic value, but it is also put to practical use; for the staff may be seen stuck in the ground, or leant against a tree, with the owner's satchel hanging on the hoe or hook.

At Isgogo a staff (*b*) was seen with a spear-head top; near Zuru there were two chains suspended between the arms of a fork (*c*), and also a plain unornamented top; the latter type was also seen at Tadurga; at Ribah there were two hoes with the top of the staff unornamented (*d*).

Just below the hoe the rod is squared for a length of 2 or 3 inches: this portion and sometimes other parts of the rod have incised designs of typical Dakarkari geometric pattern.

The widow of a chief farmer will carry his staff of office.

The Ugamba (fig. 7)

The *ugamba* is an ornamented forked stick from 2½ to 3 feet in length, which is the badge of honour of great wrestlers. They may be seen at wrestling contests and on graves. *Ugamba* on graves may consist of only a small unornamented forked stick. The illustrations show two fairly

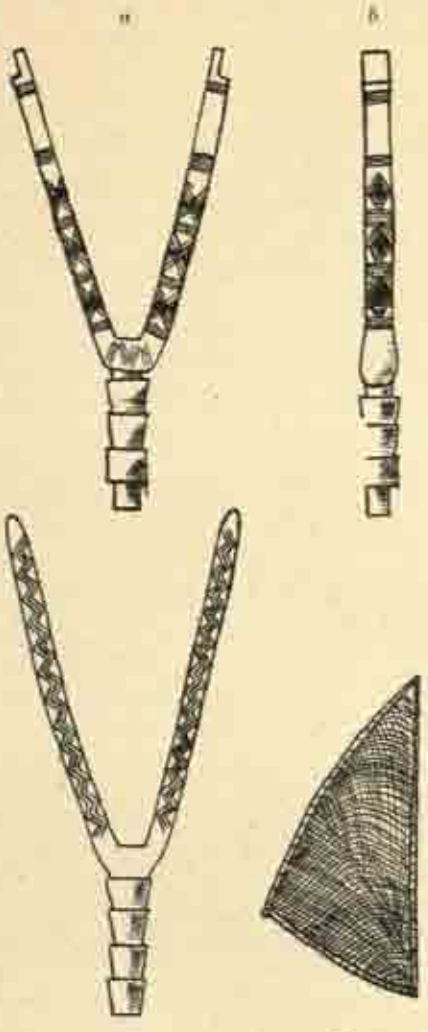


Fig. 7.—*a*, *b*, *c*, UGAMBA; *d*, FISHING-NET.

elaborate *ugamba*. Occasionally they are more elaborate, but usually they are less elaborate.

Hunting

The Dakarkaris use bows of the flicking variety, which are common all over the Northern Provinces, but their arrows are 3 feet to 3 feet 6 inches long in contrast to the usual 2½ feet. The arrows are not feathered. The head is of iron, barbed, and poisoned. The poison is made mainly of varieties of *Strophanthus*, which are to be bought in any market.

I have never seen any hunting, but I gather that small animals are hunted with the aid of dogs, which are kept in great quantities and purchased from the north-west. Big game is hunted by individual stalking, or by a group of people.

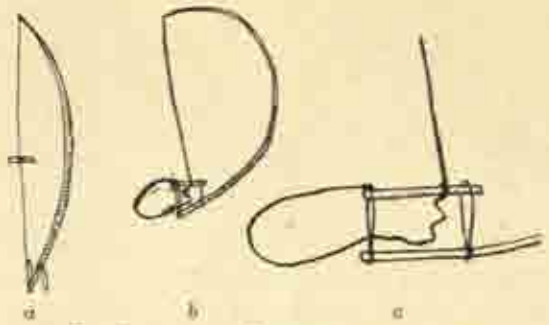


Fig. 8.—*a*, BOW; *b*, *c*, TRIP-SPRING TRAPS.

Trip-spring traps are made for rats and birds, and I gather that the same thing is made on a larger scale, although I have never seen any examples. The illustrations (fig. 8, *b*, *c*) make the principle of the trap quite clear. There is a bow with a peg tied in the centre of the string. At one end of the bow there are two loops close to one another, which hold the peg when the trap is set.

Fishing-nets are used. The method is for a man to take one net in each hand and march up a river. With team work quite a number of fish can be caught. The length of the net (fig. 7, *d*) is about 3½ to 4 feet. The Hausas to the east make a similar net a foot longer, the only other difference being that the longer arm projects so as to form a handle. Such a handle is not necessary in the smaller and less unwieldy variety of the Dakarkaris.

Shoes

The Dakarkaris do not normally wear shoes, except for the older men, who wear the shoe commonly seen in Northern Nigeria (fig. 9, *c*, *d*), which is made of a carefully shaped sole with strips of leather forming a frame round the heel and through the division next to the great toe. From the junction above the great toe there is a connexion with the toe of the shoe in order to prevent this from sagging and scraping along the ground.

A type of clog peculiar to the Dakarkaris (fig. 9, *a*, *b*) is to be seen in the hill districts. It is not much worn except by dandies and young belles. It is made of wood and is nearly always incised in the typical Dakarkari style.

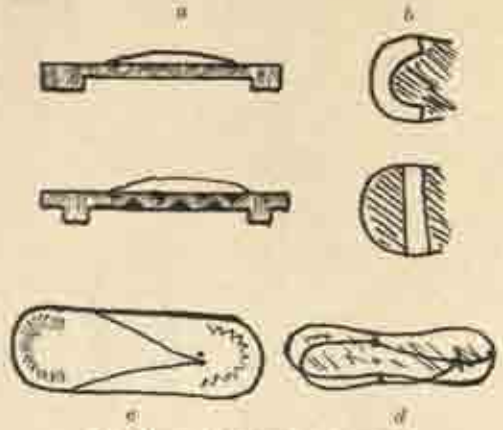


Fig. 9.—*a*, *b*, CLOGS; *c*, *d*, SHOES.

Agriculture

Terracing used to be done in the old days when there were wars. There is quite a fine system of terraces on the hills at Kelo and Isgogo, but these appear not to have been used for some considerable time. As the crop is millet, I presume there was no elaborate system of irrigation. The Daka are some of the keenest farmers in Nigeria. This is largely a matter of prestige, and is connected with the *guolmo* system which makes such demands on the clearing of bush that the area seems doomed to become treeless.

Agricultural Implements.—The farm implements used are those which are to be found in most parts of Northern Nigeria. There are two varieties of weeding hoe, a plough-hoe, sickle, axe, and adze (fig. 10, *a–f*). I also came across a type of bill (*g*) which is not in regular use; it is a general purposes weapon and can be used as a walking stick, club, and bill, or for cutting guinea-corn.

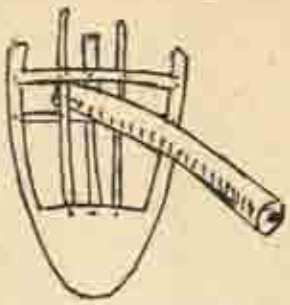


Fig. 11.—PLOUGH-HOE.

The plough-hoe (fig. 11) is made up of several pieces of metal. It will be noticed that the sickle has a projection at the corner of the blunt edge. The projections vary in size, shape, and number and are for purposes of recognition. Harris says that females only have decorated hoes. However, I have found that both men and women have incised designs on their hoes; it seems to be a matter of choice and energy, and (as far as I could make out) the hoes of men were more inclined to be decorated than those of the women.

Socketed sickles are rare, as the handle is uncomfortable, and the blade is liable to pull out.

Weaving

Weaving and dyeing appear to be arts foreign to the Dakarkaris. No dye-pits are to be found in Dakarkari villages; however, a certain amount of weaving goes on. The small loom is exactly the same as that used in all the surrounding districts. The drawing (fig. 12) and photograph (Pl. B. 4) make it perfectly clear. The warp may be plain white or in colours, and is prepared by being hung out round the compound wall. When prepared it may be anything up to 60 feet long,

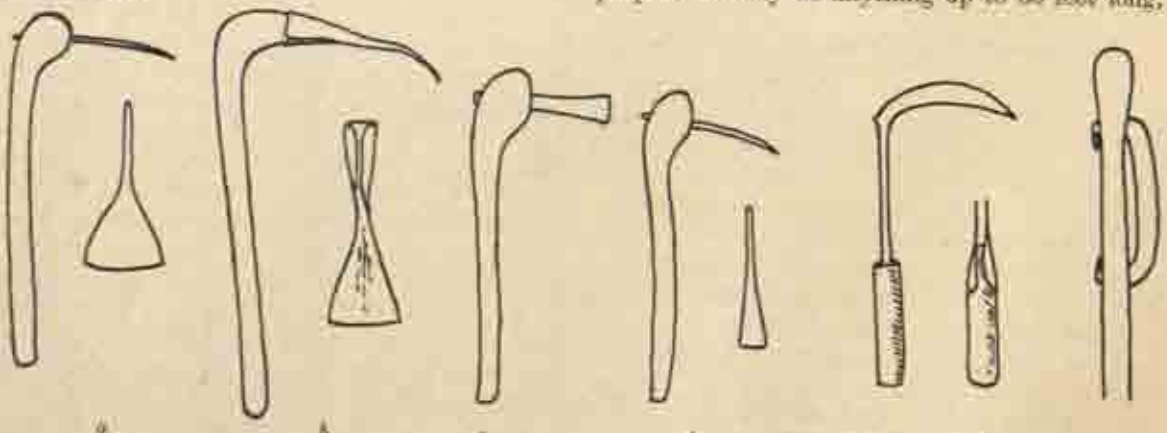


Fig. 10.—AGRICULTURAL IMPLEMENTS.

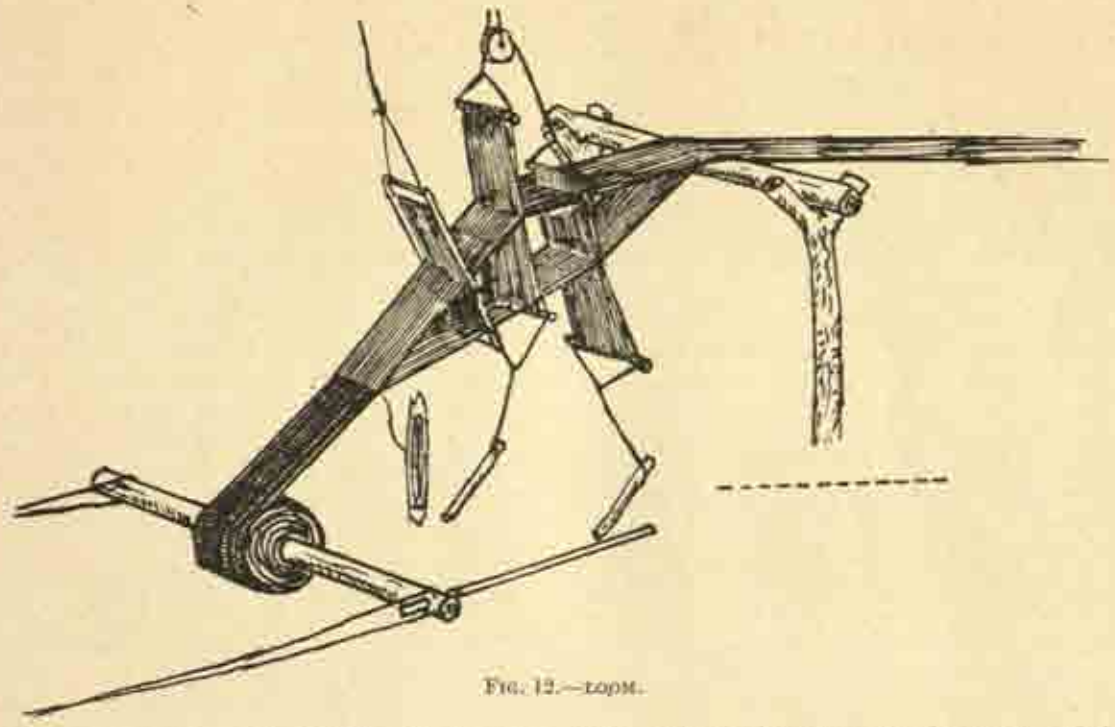


FIG. 12.—LOOM.

so that a man will work in his hut with the other end of the warp tied to a rock on the farther side of the compound; the size of the compound seems to limit the length of the warp. Women make the thread and wind the warp, but men do the weaving. The warp is threaded through two heddles and a comb. The method of threading through the heddle is shown in the illustration. One end of the warp is tied to a stick. On to this the finished cloth is wound. This stick is kept

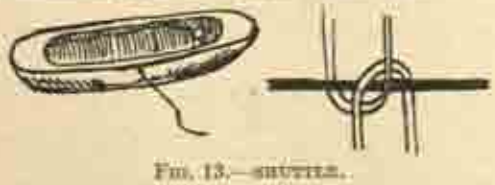


FIG. 13.—SHUTTLE.

under the weaver's legs, and is prevented from going forward by stays tied to some object behind the weaver; twisting is prevented by a smaller stick which penetrates a hole at one end. The heddles are worked by the feet. Both heddles are connected by a string which passes over a pulley or rocking arm above them, so that when one heddle is forced down by the feet the other is automatically pulled upwards. After the shuttle is thrown, the comb, which is supported from above on a string, is allowed to fall to beat up the weft. The final product is a long piece of cloth 4 inches wide, done in ordinary alternating cross-weave. The shuttle (fig. 13) is a boat-shaped object about 9 inches long into which the bobbin is fitted by means of a long sliver of bamboo. The thread comes out through a small hole in the side of the shuttle.

Granaries

Granaries are made by women. Some serve as larders in which the daily rations are kept. There are smaller types for the interior of huts

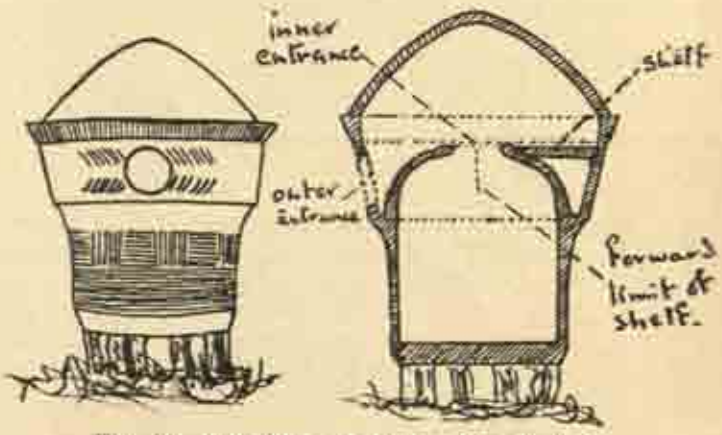


FIG. 14.—GRANARIES: ELEVATION AND SECTION

and larger store houses (fig. 14), which are as large as (if not larger than) the ordinary native hut, and have thatched roofs.

The granary stands about 8 feet high, and is raised on an inner and outer ring of stones. The entrance is a small hole in the top which will just admit the passage of a woman or child. Over this is a roof which accommodates a large loft. The loft completely encloses the top of the granary proper, and it will be seen from fig. 14 that the wall of the loft has a small hole: this hole will just admit the passage of a woman or child. The walls are about 3 inches thick. The opening of the granary is sealed with a flat stone. That part of the loft opposite the entrance is filled with a large shelf constructed as shown in the diagram: it has three or four vertical struts. This shelf is used as a depository for pots and calabashes: the corn is extracted by a woman or child entering the loft and scooping the corn up; when the level of the corn sinks too low for this to be accomplished the inner granary has to be entered. The loft is covered with thatch. The walls of the granary are decorated with incisions, sometimes painted with white, black, grey, or brick red. Sometimes great care is taken with the painting of the granaries, but too often they are only painted on the side which will be seen by persons passing or entering the compound.

The larger store consists of a huge round mud building, with a hole in the top. The diameter may be up to 10 feet and the height the same. The top is sealed with a flat stone, and the whole thatched. In order that access may be easily gained to the granary, the apex of the thatch is so made that it can be lifted off without disturbing the rest of the thatch.

Fire-Making

Fire is made by the hand-drill method. The base-plate is formed of a few of the lower segments of a guinea-corn stalk, split in half, and held by the foot with the pithy surface uppermost. The drill is composed of the upper segment of the guinea-corn stalk. This segment is usually straight and thin and about 18 inches long. The drill is first pointed: when the drill pierces the horny shell of the base plate smouldering dust is produced. Fire can only be produced by this method if the stalks are perfectly dry; the least damp will prevent fire-making.

Another method sometimes used is with flint-and-steel. The stone which is used is found in the local quartzite rocks; it is extremely difficult to produce a spark, owing to its poor quality.

The above methods of fire-making are seldom used now as matches are on sale in all the markets, and if matches are not available there is always a fire going somewhere in the village.

Pictorial Art—Interior of Houses

The interior of houses at Zuru, Riba, Kainya, Diri, and Daura were decorated with various line drawings, from which I have made a representative selection.

Most of those shown in figs. 17, 18, come from Ribah and Kainya. Zuru also has the same types as these. It will be noticed that all the drawings are highly conventionalized, and most are done in the same medium, black lines with white borders. Fig. 23 consists of a white mass with no black outline. This was apparently 20 years old, judging by the description of the artist, who said he did it when he was a boy. Most of the drawings occurred in *zaures* (entrance huts to compounds). Fig. 31 is the only design I saw inside a house at Kebu.

It will be seen that the designs from 30 onwards bear a great resemblance to those outside the doors of houses (fig. 19).

The main point of interest about these drawings is that (with the exception of Zuru) they are confined to those areas where there is no grave pottery.

In houses at Daura I found white outlines of hands exactly similar to those seen in the Spanish prehistoric caves. The outlines were all those of children's hands, and children informed me that they did this in the same spirit as Europeans carve their initials on ancient monuments or places of interest. Near Kano, children make impressions of their hands on the exterior walls of huts.

Another type of art is the decoration of mud beds with very fine patterns in cowries.

Whether or not there is magical significance in the hands, cowries, or the guinea-corn in fig. 17 (1), I am not prepared to say, although I know that many people will come out with their 'spiritual surrogates,' 'sympathetic magic,' and other anthropological tags, which sound learned but make little sense.

House Decoration—Exterior (fig. 19)

The exterior decoration of houses can be divided into two classes: (*a*) that borrowed from the Hausa-speaking peoples and, (*b*) the indigenous art. The distribution of this art is identical with that of the pottery, which will be described later in *J.R.A.I.*

In the drawings of designs on the exterior of houses, relief is shown by the shading. The pencilled portions are on a lower level, thus (fig. 15).

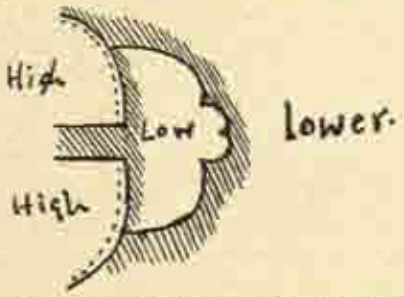


Fig. 15.—Diagram of decorative relief.

In these door decorations there is usually a symmetrical design, but when the design becomes complicated it ceases to be symmetrical. The patterns from the western or Sokoto side are quite different from those of the eastern or Zaria side. On the east there is almost invariably a snake or suggestion of a snake in the design. Whether or not this has anything to do with a snake-cult I do not know, but there is a '*juju* house' at Dabai, which is outside the eastern area of door patterns. This house is an ordinary *ɣaure* (entrance-hut to a compound) with the usual three corn-bins inside. Whenever snakes are found they are caught and put inside the *ɣaure*, where they are supposed to live behind the corn-bins. If any suspected thief is caught, he is put in this *ɣaure* for a night, and will certainly be bitten and killed if he is guilty. The *ɣaure* is normally inhabited by the owners of the compound, who are not disturbed by the snake.

The indigenous designs consist of some form of cross or the representation of a bundle of grass round the doorway; these usually appear at the entrances of ordinary huts (*daki*), while the foreign designs appear mainly on *ɣaures*. The Dakarkari compound does not usually have a *ɣaure*. Note the shape of the door in fig. 19 (15). This also occurs at Zuru, and at Dirin Daji and Kainya it occurs with the projections less defined. The bound-grass pattern in fig. 19 (15 and 17) actually occurs in the form of grass in some huts and rest-houses. The cross varies from type 20 through 17 and intermediate forms until 25 is reached; thus 25 is, in fact, a degenerate form of cross. In 17 the two points are raised over the grass pattern, and the pattern is continued under the points. Fig. 19 (27) probably represents an *ugamba* (fig. 7, above), but may be a degenerate cross. Fig. 19 (26) is a pattern of slabs of white stone, with the edges facing outwards, which occurs in the hill-districts of Kebu, Isgogo, and Dabai, where this stone is obtainable.

Finally there is the elaborate pattern (fig. 16) which is not Dakarkari. This is found at Wasagu, and at Kurmachi and Bena to the south of Wasagu. The actual pattern is an 8½-foot section of a *daki* wall at Kurmachi, which was formerly a large walled town, but now only boasts eight compounds. The whole outer wall was thus decorated. This pattern was made twenty years ago: the owner has just died of snake bite, December, 1940. The prevalence of the snake in this pattern is most noticeable.

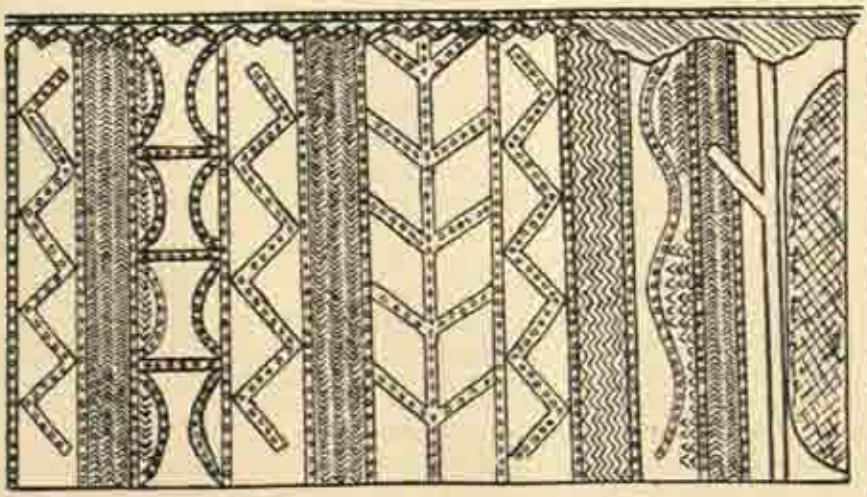


Fig. 16.—Wall decoration at Kurmachi.

The eastern section (fig. 19, 1-8) corresponds with the area of drawings on the interior of

houses. The western section (fig. 19, 9–27) corresponds to the area to the west which is devoid of grave-pottery, and the 'indigenous' designs come from the area in which grave-pottery is found.

The method of producing a cross is extremely interesting. It is either gathered together as a bundle at the point of intersection, or is formed by two >'s or V's. This appears to be typical in West African art, and also occurs in boat-patterns of the Ga of the Gold Coast.

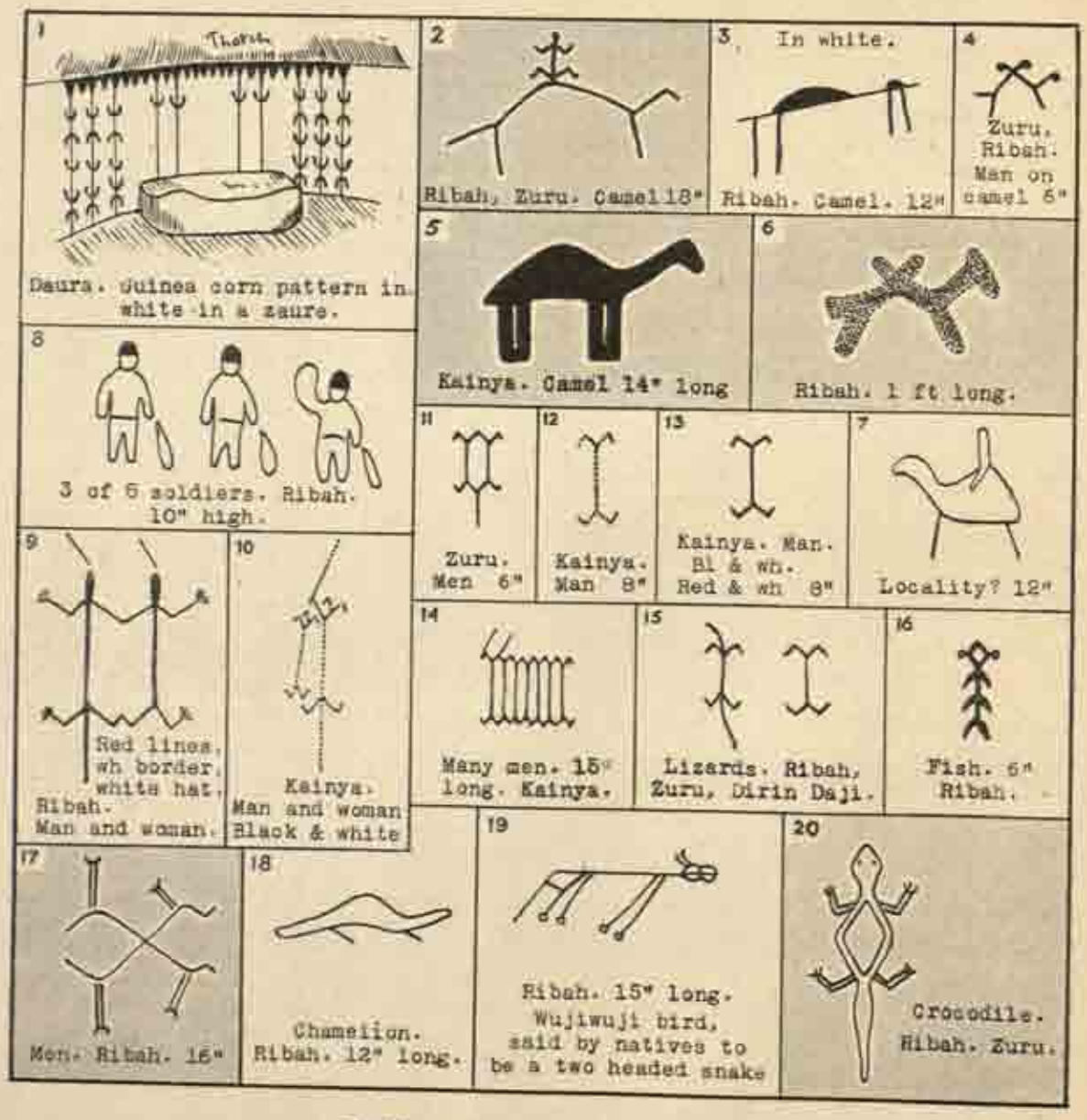


FIG. 17.—HOUSE DECORATIONS; INTERIOR.

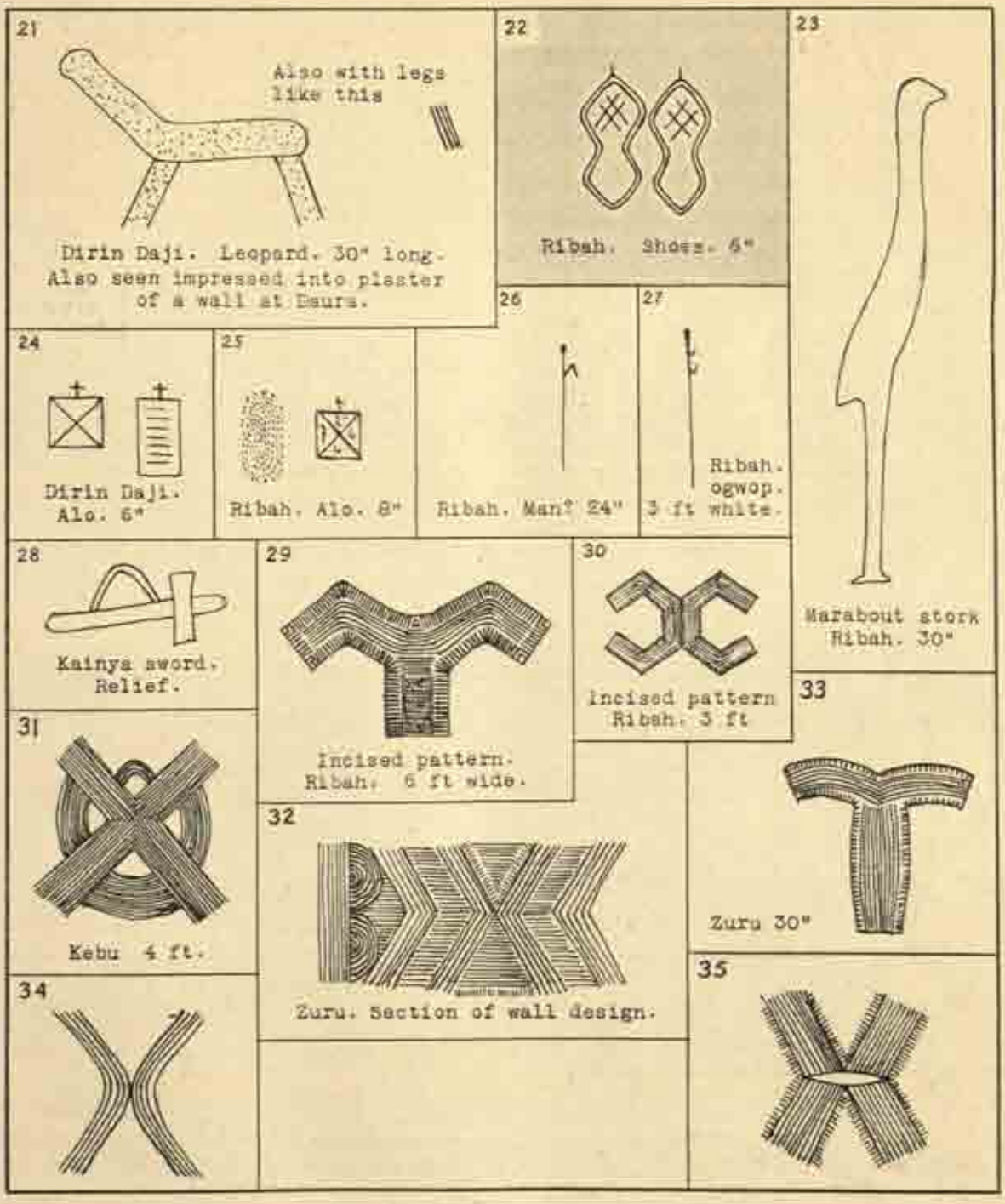


FIG. 18.—HOUSE DECORATIONS: INTERIOR.

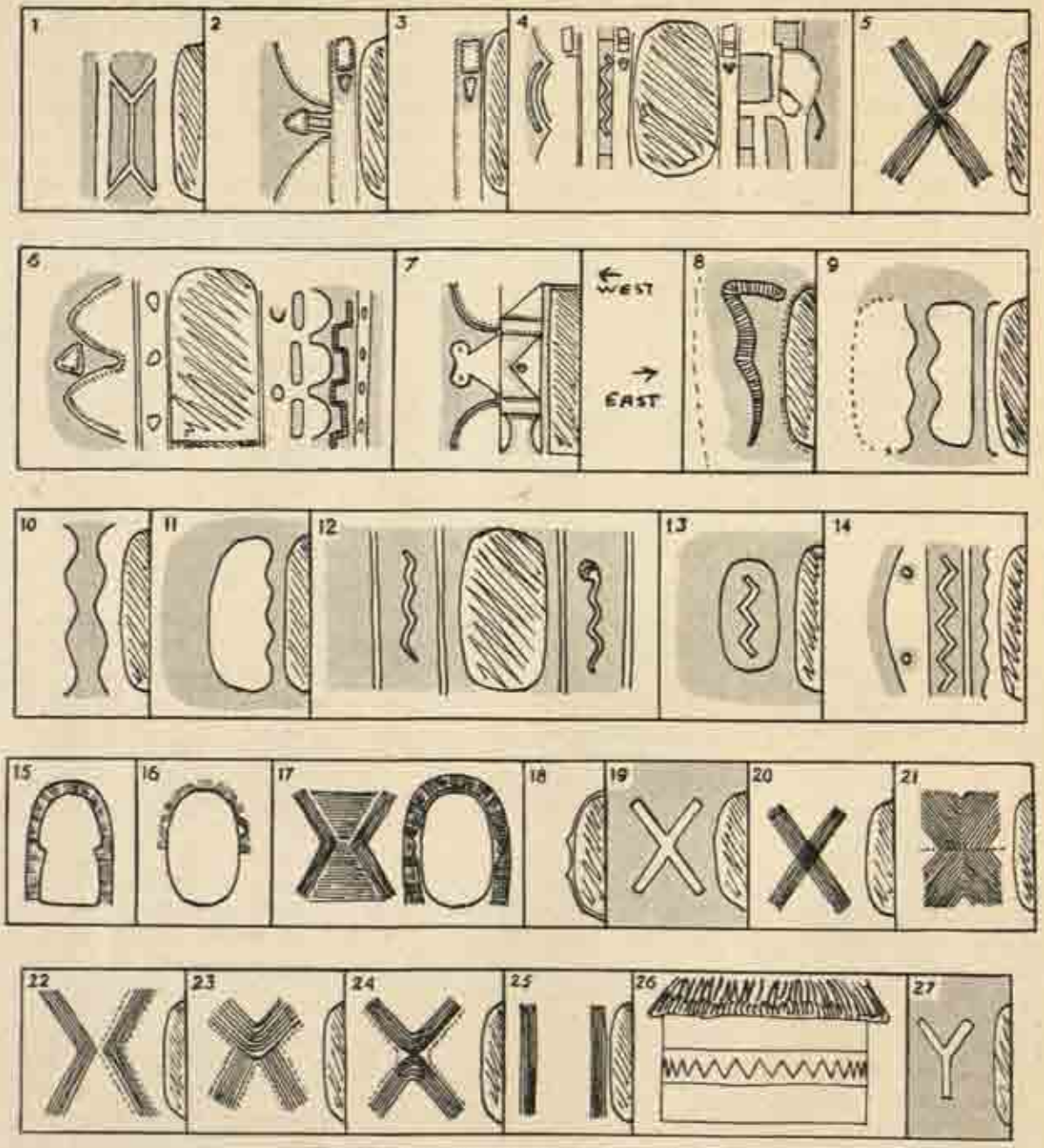


FIG. 19.—EXTERIOR DECORATIONS OF HOUSES.

1. Mahuta.
2. Mahuta.
3. Mahuta Fakai.
4. Fakai.
5. Fakai.
6. Fakai.
7. Zuru.
8. Ribah, Kainya, Dirin Daji.
9. Ribah.
10. Ribah, Dirin Daji.
11. (?).
12. Ribah.
13. Ribah.
14. Kainya.
15. Mahuta.
16. Kandu.
17. Dabai.
18. Zuru.
19. Kandu, Kebu.
20. Isgogo, Kebu.
21. Isgogo.
22. Zuru Dabai.
23. Zuru Dabai.
24. Zuru Dabai.
25. Dabai.
26. Kandu, Kebu, Isgogo, Dabai.
27. Zuru.

THE PRIMITIVE CHARACTER OF POETIC GENIUS. *A Paper in Section I (Psychology) at the British Association's Meeting at Dundee, 2 September, 1939, by Professor John Murphy, University of Manchester.*

20 *Its Imaginative Quality.*—It is obviously a matter of history that, among the forms of literature, Poetry is the earliest, that it precedes, for instance, the literature of Philosophy and Science. In this historical sense the poet is more primitive than the man of science or the philosopher. It is significant that the poet shares this priority with the artist, because this is due to the characteristic common to genius in both, namely, that it is predominantly imaginative rather than reflective and abstract in its thinking. We cannot prove that the artist-magicians of the Magdalenian caves were not profound logicians or theologians, though the probable magical purpose of their pictures, resembling the magic of lowly and unreflective tribes of to-day, throws some doubt upon it. But, on the other hand, the accuracy of those pictures, engravings, and modellings in clay of their animals of the chase, carried out with faint light in dark caverns far from the living models, points to the possession of a remarkable power of remembering and visualization within the mind, in a word, of imagination. The poet, as we know him from speech and writing, is many thousand years later in appearing than these primitive artists of the late Palæolithic Age; but he is nearer to them and to the primitive type in general in that the creative instrument with which he works is imagining, thinking in images rather than in abstract terms, expressing his mind in metaphors rather than in prosaic reasoning.

The Primitive Mind.—It is necessary to define what we mean by primitive; and this may usefully be done by observing a distinction which may be made between what we shall call the primitive and the civilized type of mind. This contrast emerged within a fairly definite historical period through the development of the civilized out of the primitive under certain sociological conditions, which I may briefly describe. At one period of prehistory, it is clear, there were only tribal groups in the world in the condition, broadly speaking, of those peoples existing to-day who are known comprehensively as 'savages'; and thereafter, at the beginning of history, say, six or seven thousand years ago, there began to appear in fertile regions from Egypt and Greece through Mesopotamia to India and China agricultural communities which built up at last a culture of cities, and created what we know as the ancient civilizations of states and empires. The economic and social conditions which made possible this transition from tribe to empire, as M. Moret expresses it, have been brilliantly defined by Prof. Gordon Childe (*New Light on the Most Ancient East*, p. 283) as two great revolutions, namely, "the change from a food-gathering "to a food-producing economy and the establish- "ment of urban civilization based upon industry "and commerce." As a consequence of these revolutionary changes peoples who had no higher than the tribal culture as we know it to-day among what we call savages, acquired within some three thousand years an organization of their life which was by contrast highly civilized, and at the same time achieved a new type of mind, the civilized mind. This has, in fact, through the invention of writing and the preservation of the culture in literature, become the standard of civilized modern thought ever since.

There remain two more points to be noted with regard to this non-primitive type of mind, first that it appeared over the vast area of space from Greece to China, and yet concentrated within a narrow belt of time, namely, between the ninth and fourth centuries B.C., in the astonishing series of groups of men of genius, including the poets and philosophers of Greece, the Hebrew prophets, the early Hindu philosophers and mystics together with the Buddha, and the ethical and philosophic teachers of China. In the second place, to mark the contrast with the primitive mind, may be mentioned the three salient characteristics of the modern type: *first*, the power of abstract or conceptual thought; *second*, the capacity for ethical judgment; and *third*, a comparatively developed self-consciousness in the individual.

We may now summarize the chief characteristics of the primitive mind before proceeding to show in detail in what ways they appear in poetry and the poet. The primitive mind is near to the mind of the animal from which it has evolved, and is thus strongly determined by the fundamental instinctive needs man shares with the animal, such as the need of food, of safety

from danger, of sex, and of social co-operation. Its thinking is perceptual rather than conceptual, concerned with the phenomena of the external world more than with ideas within the mind; and it solves its problems or rather evades its difficulties by action instead of by meditation. The language of the primitive mind, in other words, primitive language, sounds highly poetic, because it is full of the sights and sounds of nature, perceived by the senses and turned into metaphors.

Sensitiveness to Nature.—The first point we note, then, which connects the poet and the genius of poetry with the primitive mind, is in relation to man where he is actually most primitive and nearest to the wandering, hunting animal, or where, being civilized, he slips into that condition of mind in some wild scene of Nature or again recovers pleasurably through the genius of the poet an ancestral primitive experience. The late W. H. Hudson, the essayist and brilliant naturalist, was a poet in everything but writing verse; and he describes how he used to ride out into one of the vast plains of Patagonia, and spend hours in simply gazing over its desolate expanse. He says that, while he looked, he scarcely thought at all; to think seemed like starting a noisy machine in his brain; and his state was rather one of 'suspense and watchfulness.' "The state seemed familiar rather than strange," and was "accompanied by a strong feeling of elation." His own explanation is that he had reverted "to the primitive and wholly savage condition" (*Idle Days in Patagonia* (Dent), pp. 211–12). He is probably right; and one may see there the primitive food-gatherer or hunter, as near as possible to the instinctive animal, under the impulse of the hunger need, thinking not at all, but with every sense keyed to the perception of the slightest sign of what might satisfy it. It was, nevertheless, the poetic temperament, chiefly indeed the poetic imagination, which restored that keen awareness of the senses to the sights and sounds of Nature, and which at the same time enabled Hudson to recognize it as a revival of that extremely primitive state of mind in man and animals.

Return to the Wild.—It is an aspect of the same primitive characteristic of the genius of the poet that he has the power—denied to the philosopher or the man of science—to recover for himself, and to convey to others through his poetry, the eager interest in wild nature which was the everyday consciousness of earliest man for many thousands of years, so that every movement or shadow or sound in the jungle or on the plain was of vital importance, as promising him food or threatening him with danger. This is surely the secret of that exact observation of small facts of Nature which in the poet resembles the accuracy of science; as the old yeoman-farmer in *Cranford* said he had never noticed how deep the black of ash-buds in March was until a young springald called Tennyson told him, or as Burns puts together two things which do really come together in the Scottish springtime:

> "In times when daisies deck the ground,
> "And blackbirds whistle clear."

It is, further, doubtless part of the charm of poetry that it has the power to reawaken in us that sleeping ancestral past, which was lived through for immeasurable ages by creatures whose bodies and brains are in our inheritance, and thus to convey a subtle pleasure as of excitements felt without the real danger which first accompanied them. For in that attitude of 'suspense and watchfulness' which Hudson regarded as a reversion to the primitive in himself, wherein man, the semi-instinctive animal, looked out upon the world with such tense interest, there was doubtless an expression of that other form of the instinct of self-preservation besides the food-instinct, namely, the fear of danger. The life of early man, or of the sub-human being who descended from the trees, must have been highly adventurous; with him, everything strange or unusual was dangerous until it had proved itself harmless or useful to life. His safety depended then partly, like the animal's, upon the accuracy of his sense-perceptions, but partly, also (and, of course, more and more) upon his human brain with its inventiveness or in other words its constructive imagination. This gift, like all talents and powers, was double-edged; for the imagination, as it developed with advancing intelligence, added to the perils of the wild which were perceptible by man's senses, and could be guarded against by familiar means, those unknown, invisible powers, whose presence he instantly imagined wherever anything he could not understand, the strange, the unfamiliar, forced itself upon his attention. Ultimately, his simple ingenuity devised ways and means of meeting

these intangible powers as well as the threats to his safety of the dangers perceptible to his senses; but the fact remains that to our savage ancestors, as to many primitive types to-day, life is highly adventurous, and among its more frequent thrills is the pleasure of escape. Here, we may suggest, comes in the power of the poetic imagination, whether in the poet or the writer of romance, to recover for himself and for his civilized readers these primitive feelings, by creating the atmosphere of the strange, exotic, and perilous, and arousing from his normal unconsciousness that ancestral primitive human being in us, whose thoughts for untold ages were mainly imaginative and whose life was all adventure.

Metaphorical Language.—The language of the poet is archaic. It is obviously so in comparison with the language of science and philosophy. We all remember Emerson's phrase that language is 'fossil poetry.' In fact ordinary civilized speech is full of hidden similes and embalmed metaphors. We think of the spokesmen of the more advanced tribes as orators, because their language sounds high-flown and poetical. It is indeed full of word-pictures and picture-words, images from the concrete world, because, as already suggested, man is imaginative before he is intellectual. I do not say that the civilized poet is an atavism—I reserve that term for the impressionistic poets and writers—but the poet in general does, as we know, speak concretely of 'meadow, grove and stream,' and by his images from the natural world lays an ancestral spell upon us. The most primitive types of speech known to us are closely attached to concrete things by the link of similarity. M. Levy-Bruhl, in noting the rarity, in the language of savages, of generic terms corresponding to general ideas, speaks of "the extra-"ordinary abundance of specific terms, that is, "terms designating beings or objects of which a "particular and precise image is pictured when "they are named." In his quotation from Mr. Brough Smith, also, concerning the extinct Tasmanians, there is described a singularly primitive type of language. He says: "The "Tasmanians had no words representing abstract "ideas; they had a name for each variety of "gum-tree or brake, etc., but no equivalent for "tree. They could not express abstractly the "qualities, hard, sweet, hot, cold, long, short, "round, etc. For hard they said, 'like a stone' "..., for round, 'like a ball,' 'like the moon' "and so forth, usually adding a gesture to the "word, and confirming by a sign addressed to the "eyes what they wished to convey" *Les Fonctions mentales dans les sociétés inférieures* (Paris, Alcan, 1922). The poet thus in his use of metaphorical language, with concrete images from nature, is further linked with the primitive.

Impressionism and the Primitive.—I have already made the half-serious suggestion that the impressionistic poets and prose writers may be regarded as a return to the primitive. A reversion from *homo sapiens* to *homo alalus*, to man with a very primitive kind of language, might have the charm which we have seen that W. H. Hudson felt in gazing across the Patagonian plain, when his mind reverted to a semi-instinctive watchfulness similar to the animal's intense interest in its world. The elation Hudson felt was due partly to rest from thought, the mind falling back upon the purely perceptual, and partly to the renewal of an ancestral experience. Impressionism appears to me often to fall back upon a primitive form of language akin to that stage in the speech of very early man, when, according to the late Sir Grafton Elliott Smith, he expressed himself in a series of pairs of words, with a sensory and usually visual connotation, strung together (as he humorously suggests) like the speech of Mr. Alfred Jingle in the *Pickwick Papers*. The charm of this mode of expression may lie in the relief it gives from the malady of thought, which is oppressive enough in these times, and in relapsing upon the impressions, largely perceptual and in the form of images and metaphors, given by the language. To this may be added the satisfaction in the exercise of one's own imagination in filling out the meaning, and also a certain pleasure in solving the problems presented by the unusual or distorted words, similar to the restful fascination of the crossword-puzzle.

Wizard, Artist, and Poet.—I have mentioned that the earliest art known to us, that of the palæolithic artists, had a magical purpose; the earliest poetry which has been preserved consists of magical texts; and so the most primitive poets were the magicians of their people. There are some interesting psychological reasons for this. Primitive man, where he is nearest to the animal, which obeys its instincts largely without pause for thought, deals with his situations by action rather than by contemplation. His action,

where it concerns known and familiar things, such as the habits of his game or his weapons, is a swift, almost instinctive application of material means to ends; but where he is dealing with the unfamiliar, and to him inexplicable, his action is of a different kind. From the beginnings of his human intelligence, but especially in the more advanced stages of the tribal mind, when to his developed imagination his world was crowded with mysterious powers, which he regarded sometimes with fear and awe, and sometimes with hope, he sought to solve the problems they raised by action which was magical or religious, or, as often the one could not be distinguished from the other, by magico-religious actions. It will be convenient simply to speak of Magic, and to use as illustration its most widespread form of Imitative Magic. This depends upon the fundamental perception of similarity, of which Professor Spearman says in including it under his Principle of Relations that "Without the power "to perceive this relation" (that is, of likeness), "a person could recognize nothing and conceive "nothing; he would be mentally and even "physically paralysed" (*Creative Mind*, p. 19). Without it, of course, along with the simplest general idea and all knowledge whatsoever, the picture of the artist and the metaphors of the poet would be impossible.

Now, the application of the principle of likeness in Magic is for the most part an illegitimate one, for it makes the connexion causal, and believes that, in magic, like is the cause of like. Hence the artist-magician of the ancient caves is sure that to paint the bison on the walls as like as possible and to show an arrow head striking a vital part, is to help the hunters far out on the plains to bring down the prey, especially if words are said at the same time to that effect; and the Australian rain-maker is trusted to end the drought by imitating the sounds and falling of rain, while he adds the spoken word, "Come "down rain, come down rain, and make the "bon-yi trees grow." For it is an important application of the law of likeness that to put the desired object into words, to express the appearance of it as accurately as possible, is thought to exert a power to make it come. Hence the value of the tribal wizard who has the picture-making imagination and keen perceptiveness to see and to reproduce the wished-for phenomena and events of Nature, and who has the pictorial words in which to clothe his magic spell—in all of which one sees the primitive poet. There is an ancient text from the oldest literature in the world, perhaps, the inscriptions on the pyramids of the VIth Dynasty, which illustrates this point. It is a hymn of praise to the Nile, thought of as the god Hapi, in which the description of the blessings of fertility and beauty which were to come from the flooding down of the great river, has the force of a spell to help to bring it to pass. "They tremble, they who see Hapi [the "Nile], when he beats [his waves]; but the "meadows smile, the banks blossom, the offerings "of the gods come down [from the heavens]; "men do homage, the hearts of the gods are "lifted up . . ." No doubt there is magic here; but it is poetry.

The Epic.—In magical action to secure desirable ends, especially in warfare, and in the speech associated with it, there may be one of the sources of epic poetry. The war-dance of savage tribes, which is well known, is a dramatic acting out beforehand of the battle which is to come—the ambush, the creeping approach, the wild rush, the combat, the victory—in the faith that so to play out its likeness will be a magic power to bring the reality to pass. It is possible that the germ of the great epics and sagas is to be found in the songs of bards whose stories of fights and victories of the ancestors and heroes of the past had the effect of a strong magic and spell in bringing like deeds and triumphs to pass for their descendants. Thus, the singer or the teller of the epic tale breathed into the tribal warriors a literal power of magic as well as an emotional inspiration.

The Drama.—With greater certainty can it be said that the drama originated in the numerous dramatic representations by the tribe as a whole of wished-for events in Nature and in human life, contests of summer and winter, death and resurrection of the corn, slaying of the ox that many more may be killed for the food of the people, and so forth, all of which were magical acts expected to promote the events and blessings in Nature dramatized in them; *cf.* Jane E. Harrison, *Ancient Art and Ritual*, Ch. V. There is a striking contrast in the Greek genius between the primitive poet who was also the magician of the tribe and who was able to visualize and to organize the concrete dramatic and magical action, and the poets of the great period,

Æschylus, Sophocles, and Euripides, who dramatized great questions of right and wrong, and created personal characters of a vivid reality and tragic greatness. It is the difference between the poet of the primitive and the poet of the civilized mind.

IFA DIVINATION: COMMENTS ON THE PAPER BY J. D. CLARKE, JOURNAL OF THE ROYAL ANTHROPOLOGICAL INSTITUTE, LXIX, 1939, 235–256. *By Dr. William R. Bascom, Northwestern University, Evanston, Illinois, U.S.A.*

21 Because of the importance of its subject and the prominent place in which it has been published, J. D. Clarke's recent article on *Ifa Divination* [1] merits a rather extended comment. And for the very reason that its contributions constitute an encouraging improvement over so much of what has been written about Ifa, its more serious errors deserve to be corrected. The following remarks are based on field work during 1937–38 in Ife, Nigeria, on a Fellowship of the Social Science Research Council of New York City, under the sponsorship of Northwestern University.

Mr. Clarke is to be commended for his comparison of Ifa with related systems of divination in neighbouring areas, and of the order of the figures (*Odu*) which he recorded, with lists previously published (p. 252). The value of this undertaking, of course, would have been increased if it had been made more complete. The lists of Frobenius and Bertho,[2] for example, could well have been included, and certainly the other attempts to make comparisons of this same sort should not have been omitted. Herskovits [3] has compared his own list with those of Spieth, Le Herissé, Burton, and Skertchly, none of which are cited by Clarke. And Montiel's [4] work in particular, which discusses the relationship of Ifa to forms of divination in North Africa and Madagascar, and to horoscopy and astrology in Europe, has not been mentioned. It should be noted also in this connexion that the practices of the *babalawo* are being continued in the New World, at least in Brazil and Cuba, by the descendants of slaves from Africa.

The attempt to 'correct' these lists of figures, however, is of questionable value. It may be legitimate to reconstruct an earlier sequence or ranking of the figures on the basis of the distribution of present forms, but there is no justification for the assumption that the earlier sequence is more 'logical' or 'aesthetic.' It is perfectly possible that even at the very time of the invention of Ifa, the pairing of figures was asymetrical, as they are in all regions at present. And if the aim is not historic reconstruction, what is the value of a 'logically (or aesthetically) correct sequence'?

One of Mr. Clarke's two most serious errors derive from his failure to understand the significance of these sequences of figures. These lists serve as the basis of a ranking of the *Odu* and *Omo-Odu* in terms of their 'age' or value, a fact which is fundamental to the procedure of divination itself. In the use of Ibo (pp. 240–43), the diviner is always presented with two specific alternatives [5] and two casts of the chain of seeds are always necessary to choose between them. Thus, if an individual wants to inquire about the outcome of a proposed journey, he asks, 'Will it be good?' and the diviner casts the chain of seeds. Then he asks, 'Will it be bad?' and the diviner casts a second time. If the figure of the second cast outranks the first in terms of the list used in this locality the answer will be unfavourable, and vice versa.

It is obvious that this significant point has been missed, since the relative ranking of the figures is not discussed: on the contrary, each figure is assigned in an absolute manner as either 'affirmative' or 'negative.' [6] If this were the case, only one cast would be necessary to say 'yes' or 'no.'

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[1] *Journal of the Royal Anthropological Institute*, Vol. LXIX, Pt. II, 1939, pp. 235–256.

[2] Frobenius, L.: 'Die Atlantische Götterlehre,' *Atlantis*, x, 1926, p. xiv; Bertho, J.: 'La Science du Destin au Dahomey,' *Africa*, ix, No. 3, 1936, pp. 323–375.

[3] Herskovits, M. J.: *Dahomey*, 1938, Vol. II, pp. 210–211.

[4] Montiel, C.: 'La Divination chez les Noirs de l'Afrique Occidentale Française,' *Bulletin du Comité d'Études Historiques et Scientifiques de l'Afrique Occidentale Française*, xiv, 1931, pp. 27–136.

[5] That Clarke has at least partially realized this is to be seen in his statement, "then I whispered to the round "stone in the contrary sense, for it is a sort of devil's "advocate" (p. 243). But elsewhere he gives the impression that the question is asked only in one form, for example, throughout page 242.

[6] Montiel (*ibid.*, pp. 116–117) makes the same error, speaking of 'favorable' and 'défavorable.'

to any question. That it is not can be seen from the fact that a figure, which may indicate an 'affirmative' answer relative to one figure, will indicate a 'negative' one if paired with another which outranks it. Furthermore, the questions themselves may be asked in reverse order. If this is done, the answer in the above example would be negative, even though the same figures appeared in the same sequence.

In the specific instance cited on p. 243, Clarke attempted to test the diviner's integrity by whispering an impossible statement to the pair of cowries, and the correct answer to the stone, and these objects were given to a girl to hold. Since the cowries ordinarily symbolize good, and the stone evil, Clarke felt the diviner might choose the cowries in order to please his client. It is worth noting that the Yoruba themselves use this clever dodge, in order to make sure that the diviner is proceeding objectively. Therefore, even though the diviner may be able to see in which hand the objects are held, he cannot be sure which questions have been whispered to them. The diviner is then asked to choose between the right and left hands, and thus to indicate the object, and thus the alternative which represents the correct answer.

In this case the stone in the left hand was chosen, because the figure *Ireṣẹ Ọṣa*—which was cast for the left hand—outranks or is 'older' than *Ede Etura*,[7] which was cast for the right hand.[8] If the impossible alternative had been whispered to the cowries (in the right hand), or if the first cast produced a figure (such as *Ogbe Meji*) which ranked higher than *Ireṣẹ Ọṣa*, *Ireṣẹ Ọṣa* would have to be classed as 'affirmative' rather than negative. It is obvious, therefore, that the figures themselves are not affirmative or negative in any absolute sense, but that the choice between the alternative propositions rests upon the relative ranking of two figures.

While Mr. Clarke's description of the use of Ibo is the best available in the literature, it is nevertheless incomplete and misleading. Only the simplest form has been described; there is no mention of that which uses five objects (stone, cowries, shell, bone, and a piece of china) to represent the five kinds of good, the five kinds of evil, the five types of supernatural forces to whom additional offerings (*adimu*) can be made, over and above the sacrifices presented in the verses.

The second major error in Clarke's description of Ifa comes from an over-emphasis of Ibo and a failure to realize the significance of the Ifa 'verses' (ọṣẹ), which he describes as 'stories or greetings of the *Odu*,' and 'long prayer-cum-sermon(s).' The use of Ibo is correctly noted to be 'one of the minor ways of consulting Ifa' (p. 240), but there is no indication that the major method derives directly from the verses. Actually the verses are the basis of both the predictions and the sacrifices, while Ibo is used only to answer specific questions about the information contained in the verses. It may be used to determine what particular kind of good or bad is meant by the verse, to modify the sacrifice suggested in the verse by adding to it or subtracting from it, to determine the identity of the relatives, friends, or enemies referred to in the verse, etc.

The failure to recognize the basic importance of the verses may well result from the fact that the verses have not been completely recorded. Of those listed on pages 242, 247–249, all seem to be incomplete.[9] Only one mentions the sacrifice, and it is not made clear in this case that the sacrifice is learned by the diviner as part of the verse. A few begin with *o da fun* or *a da fun*, which always follows an introductory phrase, omitted here. Most of them, however, end just at this point, and thus are only the introductory phrases which, as Clarke points out, are often not understood by the diviners themselves. The most serious omission, however, is that of the stories similar to folktales,[10] which are a part of many verses, none of which have been included. It is these stories which give meaning to the verses by describing a problem or question similar to that which brings the client to consult the diviner. It

[7] The fact that *Ireṣẹ Ọṣa* is 'older' than *Ede Etura*, while in the list from Ilorin (p. 252) *Edi* ranks fourth and *Ireṣẹ* ranks eleventh, indicates that in Ilorin, as in Ife, certain figures are treated as exceptions to the general rule that ranking of the *Ọṣa-Odu* corresponds to the ranking of the first part of their compound name in the lists recited by the diviners.

[8] The quotation "If a child of Ifa . . . precedes an older Ifa—choose left; if an older precedes a child of Ifa—choose right" correctly indicates the relative values of the figures. But it is based on the implicit assumption that the diviner casts first for the right hand and then for the left.

[9] It should be noted that three of the verses recorded have been assigned to *Ogunda* and to *Etura*. Since the figures all have compound names (such as *Ogunda Meji* or *Ogunda Ogbe*), this must be a mistake.

[10] *See* Bascom, W. R.: 'The Relationship between Yoruba Folklore and Divining,' *Journal of the American Folklore Society*, forthcoming.

is by applying the parable of the verse to his own case that the client learns what he is to do to avert evil.

Mr. Clarke implies that it is the diviner who determines which of the several verses associated with each figure is appropriate to the client's problem. Had he realized that it is not the diviner, but the client, who does the selecting, it might have been possible for him to explain the accuracy of the diviner's predictions in more realistic terms than 'telepathy' or 'hyperæsthesia.' On the other hand, Clarke is one of the very few writers to make the important point that "if they (the diviners) are honest "we must exclude the hypothesis that, through "their associates, they inquire into the affairs "of their clients and thus know the probable "subject of an inquiry and are enabled to pre-"scribe the measures which should be taken" (p. 251).

The discussion of the mythological or theological aspects of Ifa in Ilorin province cannot, of course, be criticized with as much assurance on the basis of material from Ife, since there is so great a variation in such matters from one region to another within the Yoruba tribe. Nevertheless, from what Mr. Clarke himself has written, it would seem that in one instance at least the situation in Ilorin is the same as it is in Ife, and not as he describes it. Namely, it would seem that in Ilorin, as in Ife, the word Ifa is used to mean both the system of divination and the deity who controls it; and that this deity is known also as *Qrunmila*. Mr. Clarke has attempted to draw a distinction between Ifa, the 'oracle' or system of divination, and *Qrunmila*, the *orisha* or deity. Yet on the very next page he is forced to substitute *Qrunmila* for Ifa in order to interpret the statement that 'Elegba is the messenger of Ifa,' thus equating the oracle with the deity. That Ifa is not simply an 'impersonal force' seems to be borne out by another statement that "*Etura Qse* "is one of the . . . 'sons of Ifa'," and by the contention of Epega and Lajadu (quoted on the same page) that "*Qrunmila* and his Ifa words are "one."

THE INVULNERABLE HERO IN CELTIC LEGEND. *By Ellen Ettlinger.*

22 Accounts relating to the magical outfit of the Celtic hero occur again and again in Celtic legend. The greater part of these narrations refers to natural objects credited with inherent miraculous virtue which were supposed to alter the course of events to the advantage of their owner. The way in which the magic assistance was effected is generally not disclosed, and we are left to assume that the soul of the warrior was sustained by his trust in his supernatural protection. The conviction of his ultimate success in warfare greatly increased his skill, enhanced his power of endurance and thereby contributed to the victory over the terrified and enfeebled opponent.

Apart from this indefinite general way of help we are told that magical objects could bestow upon the Celtic hero two specified gifts, namely, those of invulnerability and invisibility. If we inquire into the origin of the idea of the invulnerable or invisible warrior it appears at first sight that these notions are survivals from an earlier period during which heroes were closely related to gods. But the analysis of the different instances will—so I trust—reveal that this origin can be attributed only to the conception of his invisibility. For we rarely find these two properties combined in the same hero, and it is only the invisible hero who achieves victory while the apparently invulnerable warrior is overcome in the end.

I propose to begin by looking at the invulnerable Celtic warrior. The object which magically protects his body is either a horn skin or a belt. There is one instance in which a horn skin may be presupposed although it is not expressely spoken of: Dermid could only be killed by the heel.[1] Similar though more definite is the allusion in the story of Conganchnes mac Dedad ('The Horny-skin'): "spears or swords hurt him "not, but sprang from him as from horn." When Niam asked him how he might be killed, he revealed that red-hot iron spits must be thrust into his soles and through his shins. Niam instructed her father Celtchar how to proceed against Conganchnes and they succeeded in killing him.[2]

[1] Campbell, J. G.: *The Fians* (London, 1891), p. 54.
[2] Meyer, K.: *The Death-Tales of the Ulster Heroes* (Todd Lecture Series, Vol. XIV) (Dublin, 1906), pp. 27–9.

From some passages in the Táin it seems possible to trace the origin of the horn-skin-covered warrior:

> Fergus warns Cuchulain: "For unlike all to whom "it fell to fight and contend with thee . . . is "Fordiad . . ., for he hath a horny skin about him "in battle against a man, a belt, equally strung, "victorious in battle, and neither points nor edges "are reddened upon it in the hour of strife and "anger."

Cuchulain's battle-girdle is described elaborately:

> it is "of tough, tanned, stout leather cut from the "forequarters of seven ox-hides of yearlings, so that "it reached from the slender parts of his waist to the "stout part under his arm-pits. He was used to wear "it to keep off spears and points and irons and lances "and arrows. For in like manner they would bound "back from it as if from stone or rock or horn they "rebounded." [6]

These passages from the Táin suggest that the horn skin was derived from the leathern battle-girdle which was used not only by the Irish Celts, but also by the Celts of the Hallstatt area, by the Umbrians, the Homeric Achaeans [8] and by the Gauls.[9]

As time went on a more complete armour was developed, and the former importance of the belt was forgotten. Legend preserved its memory either in form of a horn skin or as a belt with magical power. The compiler of the legend did his best to explain the efficiency of such a belt by ascribing it to the uncommon ability of its maker or to its provenance from legendary countries, as we shall see presently:

> "When Cormac (Mac Art) was born the druidical "smith of Ole Aiche puts five belts of defense upon "him: against slaying (or wounding), against "drowning, against fire, against malediction, against "wild dogs (i.e.) against every evil." [7]
>
> "A fairy-sweetheart gave Caoilte (the fastest runner "among the Fianns) a belt, telling him to put it on, "and not be afraid of any man." [7]

With the progress in armour magic became also associated with the new parts of the harness. This later development is reflected in a description of Lug:

> He "wore Manannan's Lorica upon him; and (its "charm was such that) no one could be wounded "below it nor above it; and he wore Manannan's "Breastpiece upon the ridge of his breast and front, "so that no weapon could pierce him." [8]

When the same Lug came to the assistance of Cuchulain the charioteer Laeg announced his arrival with these words:

> "But him no one heeds, nor gives he heed to any "one. No one shows him courtesy nor does he show "courtesy to any one, like as if none saw him in the "camp of the four grand provinces of Erin." [8]

While the gift of invulnerability was not attributed to Lug himself but to the cuirass he wore, his invisibility is innate; it is immanent in him because of his divine nature.

But this invisibility, though, unlike the quality of invulnerability, it is in origin an attribute of the gods, can be transferred by suitable means to the mortal Celtic hero, and will carry with it its victorious power. At first sight it appears as if there were two different ways of obtaining this boon, the possession of a magical object or the casting of a spell.

In *The Mabinogion* we find twice references to magical rings which provide invisibility, they must, however, be attributed to the Norman-French setting of both stories.[10] In purely Celtic legend one of the favourite requisites is the cloak of invisibility or the 'Veil of Illusion,' or the 'magic wearing-garment.' [11] We read about this magic mantle or veil in the Táin, in the Fenian cycle, in *The Mabinogion*, and even in the much later legendary history of the Battle of Clontarf, which took place A.D. 1014.

> Cuchulain received his veil of concealment, "of "raiment from Tir Tairngiré ('The Land of Promise') "which had been brought to him as a gift by Manannan "son of Ler from the king of Tir na Sorcha ('The "'Land of Light'), his foster-father in magic." [12]
>
> In the Fenian cycle Aonghus put Graimne under the

[6] Dunn, Joseph: *The Ancient Irish Epic Tale Táin Bó Cúalnge* (London, 1914), pp. 227, 188/9 (Loch also wore a horn skin when fighting with a man. *Ibid.*, p. 171).

[7] Ridgeway, (Sir) William: 'The Date of the First Shaping of the Cuchulainn Saga,' in *Proc. Brit. Acad.*, Vol. II (London, 1906), p. 156.

[8] Diodorus: Book V, 29.

[9] Reinhard, J. R.: *The Survival of Geis in Medieval Romance* (Halle, 1923), p. 119, quoted from Scéla Eogain agus Cormaic, ed. K. Meyer, 'The Laud Genealogies and Tribal Histories,' ZCP, VIII (1912), p. 310, lines 33 ff.

[7] Campbell: *op. cit.*, p. 64.

[8] O'Curry: *The Fate of the Children of Tuireann, Atlantis IV* (London, 1863), p. 163.

[8] Dunn: *op. cit.*, p. 181.

[10] *See* Loomis, R. Sh., and Lindsay, J. Stirling: 'The Magic Horn and Cup in Celtic and Grail Tradition' (*Romanische Forschungen*, Vol. XLV (Erlangen, 1931), p. 68: *The Mabinogion*, translated by T. P. Ellis and John Lloyd (Oxford, 1929), Vol. II, pp. 28, 70.

[11] *The Mabinogion*, *op. cit.*, Vol. I, p. 68, note 66.

[12] Dunn: *op. cit.*, p. 190.

border of his mantle of invisibility without knowledge and without perception of Finn.[15]

It was one of the properties of Gwenn, King Arthur's mantle " that upon whomsoever it was put, he became " lost to sight though he himself could see every " one." [16]

" Caswallawn had flung the Veil of Illusion upon him, " and no one saw him slay the men, only the sword." [17]

" The guardian fairy Eevin of Craglea loved (the " young Dalcassian hero Dunlang O'Hartigan), and " on the evening before the Battle (of Clontarf) she " came to him and tried to persuade him to stay away. " For she said if he fought next day he was doomed to " death. . . . But he told her he was resolved to go " to battle, even to certain death, rather than abandon " Murrogh (his dearest comrade) at the hour of danger. " When she found she could not prevail, she gave him " a magic cloak, and told him that so long as he wore " it, it would make him invisible and keep him from " danger, but that if he threw it off he would certainly " be killed. Next day, when the battle was raging " all round, Murrogh heard the voice of Dunlang " over all the din, but could not see him; and he " heard tremendous blows, and saw the Danes falling " just beside him. At last taking breath for a moment " he cried out, 'That voice is the voice, and these are " surely the blows, of Dunlang O'Hartigan!' " Whereupon Dunlang, thinking it a disgrace to hide " himself from his friends in battle, threw off the " cloak, and presently he fell slain at the feet of " Murrogh." [18]

Are we given some hint about the nature of such a magic cloak? King Arthur's mantle, Gwenn, was " of diapered satin " with " an apple " of ruddy gold at each corner thereof." [17] The various views about this cloak have found expression in the different translations of it. W. Lewis Jones speaks of a mantle; Lady Guest calls Gwenn a carpet; [18] T. P. Ellis and J. Lloyd tell us about " a sheet in which the hero is " wrapped." [19]

In contrast to the costly appearance of this magical object is the grey cloak of Curaoi, reminding us of grey mist and clouds.

When Curaoi stopped the magic wheel that was in motion at the door of the fortress (on an island called Manainn), and thus enabled his followers to enter, he was disguised as a man with a grey cloak.[20]

It seems to me that another type of the magical cloak producing invisibility is Laeg's over-mantle, which consisted of raven's feathers.[21]

A few lines later we read of Laeg's casting " a spell " of concealment over his horses and over his fellow " (Cuchulain), so that they were not visible to any one " in the camp, while all in the camp were visible to them. " and over this veil of protection he wounded each " one and through it and behind it." [22]

Though there is no suggestion in the Táin that it was only when he wore the magic cloak that Laeg could cast the spell of concealment, this would seem to be the case. This connexion between the magic cloak and the spell, only vaguely remembered in the Táin, became apparently lost and later references to the spell are of uncertain character.

In *The Mabinogion* the knowledge of the spell is remarked upon in a rather casual way:

" Arthur called Menw, the son of Teirgwaedd, be- " cause if they went into an infidel land, he might " cast upon them an enchantment and magic, so that " no one should see them, and they should see every- " one." [23]

Obscure is also the occurrence of invisibility in the story of the sons of Midir:

When, " assisted by the Fenni, (they) fought against " Bolb, Midir's son and Caolte went to the aid of " Oengus for a physician to heal Oscar's wounds; " and then there arose a Fóth Fiada around (them), " so that (they) were invisible." [24]

The point to be noticed here is that faeth fiada (' the wild beast's cry ') was also called the spell by means of which St. Patrick and his friends escaped from the enemy:

" Loegaire said to Patrick: 'Come after me, O " cleric, to Tara, that I may believe in thee in " presence of the men of Ireland.' And straightway " he set an ambush on every path from the Graves of " Fiacc's Men to Tara before Patrick, to slay him. " But God permitted not this to him. Patrick went " with eight young clerics and Benén as a gillie with " them, and Patrick blessed them before going. A " cloak of darkness went over them so that not a man " of them appeared . . . " [25]

[15] See O'Grady, St. H.: 'The Pursuit after Diarmuid O'Duibhne and Grainne' (*Trans. Ossianic Society*, Vol. III) (Dublin, 1857), p. 71.

[16] Jones, W. Lewis: *King Arthur in History and Legend* (Cambridge, 1911), p. 51.

[17] *The Mabinogion*, Branwen, daughter of Llyr, *op. cit.*, Vol. I, p. 68.

[18] Joyce, P. W.: *A Short History of Ireland* (London, 1893), pp. 219–220, note 3, quoted from 'Wars of the Gaels with the Galls,' p. 173; and 'Fois Tighe Chonáin,' *Ossianic Soc.*, p. 98.

[19] Jones, W. Lewis: *op. cit.*, p. 51.

[20] *The Mabinogion* (London, 1906), p. 143.

[21] *Op. cit.*, Vol. II, p. 16.

[22] Keating, Geoffrey: *The History of Ireland*, translated by Rev. P. S. Dinneen, Vol. II (*Irish Text Soc.*, Vol. VIII) (London, 1908), p. 223.

[23] Dunn: *op. cit.*, p. 187. The passage recording that " Simon Magus had made (this over-mantle) as a gift " for Darius Nero, king of the Romans (who) bestowed " it upon Conchobar; Conchobar gave it to Cuchulain; " Cuchulain presented it to Laeg son of Riangabair, his " charioteer," is doubtless a later interpolation.

[24] *Ibid.*, p. 188.

[25] *Op. cit.*, Kulhwch and Olwen, vol. I, p. 192.

[26] MacCulloch, J. A.: *Celtic Mythology* (Boston, 1918), p. 55.

[27] Stokes, Wh.: *The Tripartite Life of Patrick*, Part I (London, 1887), p. 47.

ROYAL ANTHROPOLOGICAL INSTITUTE: PROCEEDINGS.

High Places of Sacrifice in Palestine and Petra.

23 *Summary of a Communication presented by Edmund H. Hunt, M.A., M.R., Ch.B., 28 October*, 1941.

Superficially, the two 'High Places' in Jerusalem and at Petra are curiously alike, but it would be impossible to find elsewhere two similar outcrops of rock which have had such different treatment at the hands of men and in their thoughts.

Photographs and sketches illustrate the surroundings of the 'High Place' in Jerusalem, the world-famous Mount Moriah. Sir Charles Warren's drawings of 'Underground Jerusalem' show how the vast platform which surrounds Mount Moriah was built up. An air-view, from the north, shows the Valley of Jehoshaphat to the east and the Tyropœon Valley to the west, with the 'platform' between them. One of Warren's shafts (dug unobtrusively among the graves outside the south-east corner) exposed huge stones which can only be the lower courses of the retaining wall of King Solomon; while another sketch shows how the western side of the platform was built up on arches.

Thus, though Mount Moriah appears now to be almost on the same level with the ground near by, it is clear that originally, when David wished to stay the plague by means of sacrifice, it was the highest projection of a narrow ridge; and although there is nothing in the Old Testament to confirm the suggestion, the present-day appearance of The Rock bears all the signs of ancient use as a place of sacrifice. No one can reasonably doubt that the site known to-day as The Rock (or Mount Moriah) is the actual threshing floor of Araunah the Jebusite. In the Temple of King Solomon and the many temples rebuilt on the same site, the altar was placed on The Rock.

It is not until the compilation of *Chronicles* that this site became identified in the minds of the Jews with the Moriah of *Genesis* xxii. 2. The statement of Josephus: "Now it happened that Abraham "came and offered his son Isaac as a burnt offering "at that very place": with Whiston's footnote (p. 232): "What Josephus adds here is very re"markable, . . . which is not directly in any of our "other copies, though very agreeable to what is in "them, particularly in *Chronicles*, xvi. 26, 28; "xxii. 1," suggest an identification which no serious student accepts; yet the local tradition is strongly held. In contrast, the identity of the projecting rock with the threshing floor of Araunah is ignored.

In the early days of Islam, Omar arrived in Jerusalem, not with an army but with one servant and one camel, it being the turn of the servant to ride the camel. Omar asked to be taken to the Holy site, for the sacrifice by Abraham of the ram is in a way the foundation point of Islam and, to this day, almost every family throughout the world of Islam sacrifices a sheep at the annual celebration of this event. Omar was horrified to find the site a rubbish heap, The Rock being covered with the debris of destruction. He ordered the site to be cleared and ordained that never again should there be such defilement. The manner in which his wishes were carried out can be seen to-day, in that wonderful building, The Mosque of Omar, or, more correctly, 'The Dome of The Rock.' Of the total area of Jerusalem within the walls, about one-fifth is occupied by the levelled-up space surrounding the building, and the whole is guarded in the most jealous manner.

All the many 'high places' which covered Palestine have long since been destroyed or are concealed, save only the Rock, Moriah. But at Petra is one isolated and untouched with its surface deeply grooved to run off the blood from the sacrifices. The local guides take no interest in it. Comparison of this with The Rock, and particularly the grooves for blood, enables us to reconstruct the scene when David found Araunah threshing his corn. The contrast is extreme; complete neglect and truly magnificent protection; the one, forgotten and ignored, the other, famous throughout the centuries with an influence on history and on religious thought such as no other part of the surface of the earth has borne.

An extreme example of the effect of tradition; the tradition that the threshing floor of Araunah is the Moriah of Genesis; and that this tradition is in all probability false, in no way detracts from its effect.

Archæology in Soviet Russia.

24 *Summary of a Communication by Professor Ellis H. Minns, Litt.D., F.B.A.; presented 20 January*, 1942.

Archæology in Russia may be said to go back to the time of Peter the Great who commanded that precious things found in Siberian graves should be brought to his *Kunstkammer*. It was stimulated by the conquest of the Euxine coast with its Greek cities. The find of Kul Oba in 1832 turned attention to Scythic antiquities. Archæological societies arose in Petersburg, Moscow, and Odessa and a central organ was established, the Archæological Commission, which published splendid reports from 1859 to 1917. Naturally excavation was at first unscientific and aimed too much at getting handsome objects for museums.

After the Revolution, the Academy for the History of Material Culture took the place of the Commission. Two or three years ago it became an Institute under the Academy of Sciences. Centres for the study of different regions, and local museums, have been established all over the vast area. There are many workers and much enthusiasm. A drawback is that results are expected to agree with the views of Marx and Engels. There is a tendency to insist on '*stadialism*', the idea that developments at any point go through certain stages and that not much influence is to be allowed to migrations or borrowings.

The Russian Ice Age differs from that of Western Europe, and correlation is difficult. Outside the area covered by the Scandinavian ice-sheet, lack of

precipitation prevented the formation of a deep ice covering. See Gerasimov and Markov, *The Ice Age in the Territory of the U.S.S.R.* (English Summary). In the last thirty years the advance of knowledge of Palæolithic is immense; hundreds of sites have been found; see P. P. Efimenko, *Pretribal Society* (1934) and *Primitive Society* (1938); also E. Golomshtok, *The Old Stone Age in European Russia*, Philadelphia, 1938.

Oldest finds are Acheulean in the Crimean and Caucasus caves. More common is Mousterian, both there and along the Dnieper and Donets valleys: Mézin, Kostënki and Gagarino, with female statuettes like Aurignacian. There has been an astonishing find of these at Maltá, near Irkutsk. Remarkable habitations are found, not in caves but in the open.

Mesolithic is an extension of European cultures. In neolithic not much is found, but next comes the Painted Pottery of Tripolye. The "areas" now make sense as houses, and the people's lives are becoming clearer to us. But its end is a mystery. 'Cord-ware' and 'battle-axe' cultures are being studied, but the results are not yet clearly presented.

There is nothing much new for the Scythian culture of Russia, but most important discoveries in Siberia. Poor relations of the Minusinsk culture are found in Kazakhstan to the south-west; and at Pazyryk and Shibé in the Altai, great tombs c. 300 B.C., purely nomad and showing in ritual and artefacts that the people must have once used the reindeer, as we had long suspected. Textiles, leather, felt, and wood enlarge our view of their arts. Dated 2 B.C. by Chinese lacquer, the tomb of Hun chiefs at Noin-Ula in North Mongolia present an astonishing wealth of imports from Greece, and from China, as well as native things. Textiles are again rare and most striking, all best published in English by Camilla Trever.

There is not much new about the Greek settlements, except perhaps industrial workshops. The Buddhist art of Afghanistan reached Termez (Demetrias), over the border, where a stone-carved cornice has been found. The Chorasmian script, used from the fifth to the seventh century on coins and vessels, has been deciphered by Tolstov. There are new Sassanian dishes from Perm and Daghestan. The Goths in the Crimea are being looked into; also the Slavonic and Russian tribes. The bones of the Princes Yaroslav (d. 1054) and Andrew Bogolyubski (d. 1174) have been shown to correspond to the chronicles of their lives and deaths.

Mr. Basil Gray called attention to the ossuaries and terracottas from Afrosiab, and to the work on the Islamic buildings at Samarkand.

REVIEW.

GENERAL.

The Language of Gesture. *By Macdonald Critchley, M.D., F.R.C.P. London (Arnold), 1939. 8vo. 128 pp. Price 5/- net.*

25 The problem presented by a deaf-mute patient who had suffered brain-damage and lost his use of his accustomed sign talk, led the author of this little book to enquire into the methods whereby deaf-mutes communicate their wishes and ideas to each other, and to the discovery that "there exists among the deaf and dumb "a gestural system of speech which is independent of "racial and linguistic barriers, and which is largely "instinctive," and that this 'gestural system' shows 'striking similarity' with the 'sign-talk of certain aboriginal communities.'

The first chapter clears the ground by defining terms and classifying the 'expressive movements' under discussion, for among normal men gesture and speech supplement each other between wide extremes, and animals use both emotional and demonstrative gestures, as well as cries.

Chapter II is a survey of theories of the origin of language and of gesture, and of the relations between eventual sounds and 'buccal-labio-lingual gestures,' with which—and particularly with the suggestions of Paget and of Davis—the author seems to be impressed. In chapter III the neurology of gesture is examined under the categories of pantomime, expressive movements, and cutaneous phenomena such as blushing, which have their psychical and biological aspects. Chapter IV deals with sign language among deaf mutes with whom spoken language is totally or partially in abeyance, and with various systems of such sign language independent of conventional 'finger-alphabets,' and common to persons of different languages and cultural inheritance. These 'sign-languages' have their own primitive system, and some of them include gestures accompanied by sounds such as hissing or purring.

Chapters V–XIII review such 'sign languages' in various simple cultures, in religious communities and secret societies, and among classes of persons with ordinary speech but special need for secret communication. Then in chapter XIV comes oratorical gesture subsidiary to ordinary speech; and to pantomime and dance, with digressions in the Græco-Roman and the Oriental theatre (chapters XV–XVII). It now becomes possible (chapter XVIII) to classify gestures into 'symbolic' and 'instinctive,' the latter more primitive and fundamental, and often comprehended by animals, infants, and mental defectives, as well as demonstrated in the congenitally blind, though without "world-wide "uniformity of employment." Here there is instinctive parallel in the attempts of animals to communicate by sounds with each other or with man. Gesture and speech indeed seem to have "developed side by side, gesture "being comparable with an elder brother of speech"; and Dr. Critchley's final suggestion is that it "has not "achieved finality in respect of development," recurring to Paget's project for a New Sign Language, based on the greater 'versatility' of the hand than of the mouth, and the wide mutual intelligibility of many gestures.

All this does not, indeed, take us very far, but this careful and judicious presentation of the evidence will be welcome to students of gesture and sign languages.

JOHN L. MYRES.

CORRESPONDENCE.

Some English Folk-Remedies. *Cf.* MAN, 1941, 100.

26 SIR,—I send you two more extracts from the diary of my grandfather, Rev. A. B. Evans.

I. "*March* 26, 1823. Another vulgar charm . . . is that employed for the ague, by wrapping up, unknown to the patient, a caterpillar (the 'devil's golden ring' so-called) in a rag or handkerchief, to be worn round the neck for a month, or until the fits go. This disease was thus cured twice by old Mrs. Chapman of Burnham, who told it to Mrs. Evans. Dr. Hawkins told me that in Monmouthshire an old clergyman had given, for this disease, *pulpit spiders*, which he never allowed the clerk to sweep away, but left in full possession of the pulpit for the benefit of those who chose to try them. They were to be swallowed whole one *per diem* every morning, fasting. 'Dr. Hawkins' was Anthony Montgomery Hawkins, M.D., of 37, *Upper* Brook Street, London."

II. "*April* 10, 1827. Mrs. Overshot of Appenham came to ask me to apply to Mrs. Bethell for 9 sixpences of sacrament-money to make a ring for her child who has epileptic fits. Gave Mrs. Overshot 2/6.

"*April* 13, 1827 (*Good Friday*). I this morning obtained from Mr. Bethell nine sixpences out of the offerings of alms at the Sacrament for Mrs. Overshot, wife of the market gardener at Appenham parish, by her particular desire, for her daughter, a child, I think, of ten years of age, who has epileptic fits. The money is to be melted down to form a ring, which the child is to wear, and which the mother told me she was fully convinced would prevent a recurrence, and at last remove the fits. In asking for the money, she was not to say 'If you please,' nor in receiving it, 'Thank you.'"

The second charm has mediæval parallels in England.

JOAN EVANS.

Ironwork in Northern Rhodesia. *Illustrated.*

27 SIR,—In the Northern Province, Northern Rhodesia, I have recently come across two specimens of ironwork forms that I have not met before.

The photograph (fig. 1) of one of these records its actual state, and the sketch shows how it would appear if straightened out. This battered piece of ironwork is a relic belonging to Mungulube, once the senior chief of the Biza tribe, and now a village headman in the Chinsali district. The Biza are of Luba-Lunda origin and the history given of the ironwork is similar to that given of all relics belonging to present Northern Rhodesia tribes of the above origin—that the first chiefs to migrate from the Luba-Lunda empire brought the relic with them.

Allied to this piece of ironwork is a round, flat piece of iron which is hidden in the bush close to the site of the old village of the chief on the Bowa River in the Chinsali district. I have not seen this piece, but Mungulube informed me that the piece now illustrated rested on top of the round, flat piece during ceremonies.

If my reconstruction is correct and the round, flat piece fits on top, or underneath, the piece shown, the form may be either that of a stool or a brazier. But in any case the form does not appear to be of Bantu origin. Perhaps it is of Portuguese origin. For the relics of the Bemba, an allied tribe, are said to include some articles of Portuguese origin dating from the pre-migration contacts.

The second article, not illustrated, is in the possession of Chief Katyetye of the Tambo, a small tribe west of the Luangwa Valley in the Isoka district. This "tribe" is also of Biza origin, and Mungulube states that it is

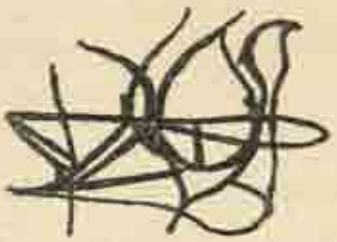


FIG. 1.—RHODESIAN IRONWORK.

(*Actual size.*)

not a separate tribe, but merely a Biza clan that was separated from the main tribe during the Angoni wars.

Mr. Gervas Clay, District Commissioner, Isoka, describes Katyetye's relic as an iron "sceptre." It is a straight piece of iron 42 inches in length, of the thickness of a pencil, and ending at the top in a small, pear-shaped protuberance. The bottom end is not pointed and may have been broken off at some time. To be seen, it had to be sent for into the bush where it is apparently concealed in some dense thicket. The origin given is the

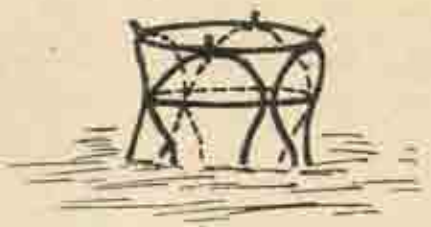


FIG. 2.—RHODESIAN IRONWORK.

(*Reconstructed.*)

same as that given for all these articles of the allied tribes.

Katyetye also has a bowstand. This I myself saw, and from its perfect shape and good state of preservation, I believe it to be a modern copy such as those mentioned in my article, MAN, 1940, 47. During Tambo inheritance-ceremonies the sceptre is laid across the bowstand at one period.

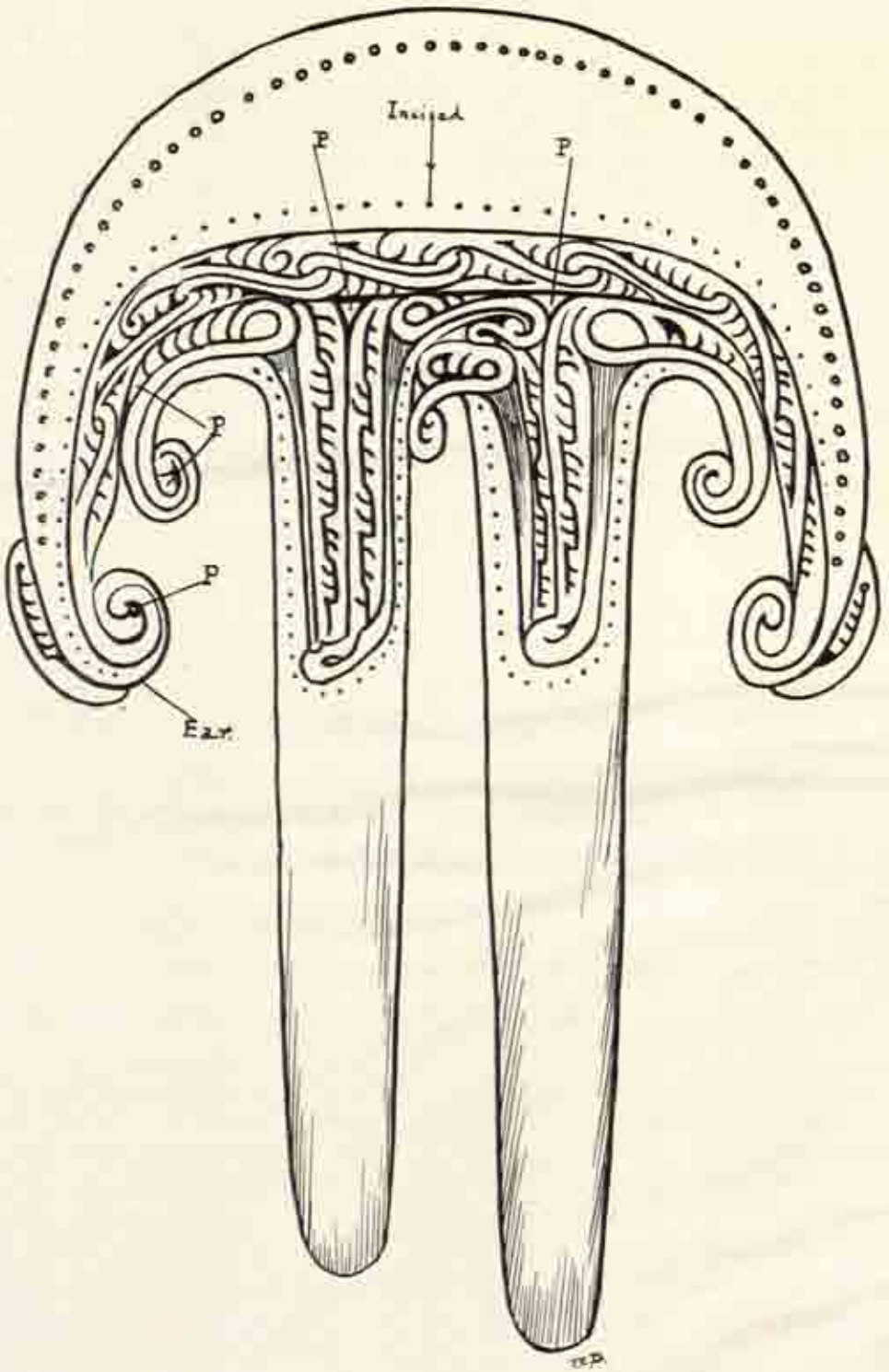
Both the forms of ironwork described are new to me, and perhaps this description is of interest to readers who could add some information about them.

W. V. BRELSFORD.

Chinsali, Northern Rhodesia.

Correction. MAN, 1941, 85.

28 The author, Mr. Herbert Maryon, asks that on p. 121, line 11 bottom, the words '—the *eutectic* alloy—' should be omitted.



CEREMONIAL LIME-SPATULA (TOBUTOBU) FROM RAMBUSO DISTRICT, MOUNT RIU (RATTLESNAKE), SUD-EST ISLAND, PAPUA (BRITISH NEW GUINEA)

Actual size: 7⅞ inches by 11¼ inches. Turtle Shell (Wyomma Varians).

MAN

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ORIGINAL ARTICLES

AN UNUSUAL CEREMONIAL LIME-SPATULA FROM BRITISH NEW GUINEA.

By T. Elder Dickson, M.A., Ph.D., F.R.S.E., and Ernest Whitehouse, A.R.M., British New Guinea.

29 While assisting the late Professor C. G. Seligman to work up his collection of Massim art material for publication, we were fortunate in obtaining from Mr. Ernest Whitehouse, A.R.M., in British New Guinea, a remarkable crescent-shaped lime-spatula with two prongs. Writing to me about it, Seligman remarked: "This may be a unique specimen. I think I know of four single-limbed specimens "in museums . . . but I have never seen a two-limbed specimen or even heard of one. Obviously "this could not be used, and it must be ceremonial *in excelsis* . . . ." In view of its unusual character, he thought it worth while to suggest sending a drawing to MAN for publication under our joint names. The following is a brief description of the specimen.

Along the outer edge of the crescent-shaped handle there is a row of holes at intervals of about one-eighth of an inch for *sapisapi* discs; the inner edge is indented with dots as if to complete the decoration of what would otherwise be a plain semi-lunar area terminating in voluted *wogog wongoga*, or ears. Curving inwards towards the prongs on each side there is a slightly smaller and simpler volute. The main decorated area is bounded on its upper contour by a band of eight interlocking curves suggestive of the head and neck of the *boi*, or reef heron; under this, at both sides, the bird motif is continued in a device which becomes part of the secondary ears; while immediately above the crutch, between the two prongs, there is an asymmetrical arrangement of curvilinear lines also based on the head and neck of the *boi*. Between the secondary ears and the crutch, projecting downwards into the prongs for about a third of their length, and approximately following their shape, the design consists mainly of roughly parallel jagged and straight lines surrounded by a row of incised dots. The lower two-thirds of the prongs, which are of unequal length, are quite plain. Here and there the turtle shell is pierced as if to enhance the general effect.

Mr. Whitehouse, in a note accompanying the rubbing, remarks: "This is exceptional, having two "tongues, and is considered quite a valuable piece of wealth in the Kula ring. The word 'kula' is "used to denote a practice carried on here, akin to Kula activities."

ORIGIN: Rambuso District, Mount Riu (Rattlesnake), Sud-est Island, Papua.

MOTIF: Heron: *Boy*; Trobriands. Heron's eye: *Marai Bou-ia*. Ears: *Wogog Wongoga*. Design: *Bagibagi-ia*

With regard to the word *boy* used by Whitehouse, Seligman noted: "he is quite correct in his "statement that this represents a heron: all my notes give *boi* as the reef heron. Actually, of course, "the birds' bills are not in the least like the straight bill of the heron, which is rendered somewhat "naturalistically on some of the *munkuris* which I collected, now in the British Museum."

Of the single-pronged specimens we have been able to trace four: One (fig. 2) is in the Pitt Rivers Museum, Oxford; another (fig. 1) is in the British Museum, reproductions of which appear in the 1925 edition of the *B.M. Handbook of the Ethnographical Collections*, p. 121, and in Haddon's *Decorative Art of British New Guinea* (Dublin, 1894). Haddon points out that a sketch of this specimen also appears in J. Edge-Partington's *Ethnographical Album of the Pacific Islands*, Pl. 281, 4. A third specimen (fig. 3) is reproduced in Seligman's *Melanesians of British New Guinea*, p. 516, fig. 40. This one is from Misima (Louisiades), but no indication is given as to its present whereabouts. A fourth (fig. 4) is in the British Museum. We should be grateful for information about other specimens.

Fig. 1.—British Museum.

Fig. 2.—Pitt Rivers Museum, Oxford.

Through the courtesy of Mr. H. J. Braunholtz, of the British Museum, of Mr. T. K. Penniman, Curator of the Pitt Rivers Museum, and of the Cambridge University Press, these other specimens are figured here, and described in detail; figs. 1 and 4 by Mr. Braunholtz, fig. 2 by Dr. H. Meinhard.

Fig. 1.—British Museum:—Turtle-shell lime-spatula, with frigate-birds' heads carved in open work. S.E. New Guinea, Archipelago (? Trobriand Islands). The crescentic handle is bordered with small perforations for the attachment of beads or seeds. Length about 9 inches [the spatula being at present inaccessible, this measurement is approximate]. See *B.M. Handbook to the Ethnographical Collections* (1910), p. 122, fig. 105; Haddon, *Decorative Art of British New Guinea*, p. 192, fig. 68; Edge-Partington, *Ethnographical Album of the Pacific Islands*, Pl. 281, No. 4.

Fig. 2.—Pitt Rivers Museum, Oxford:—Reg. No. "1910 B. 157. Turtle-shell lime-spatula of elaborate form. S.E. Brit. New Guinea." [Note in catalogue.] Purchased 1910 from the London Missionary Society, when their museum was broken up and dispersed. Length 10¾ inches, greatest width of upper part 6¼ inches. One end of semilunar upper part (right in the photograph) broken off. Near the outer edge of upper part, a row of small perforations, through which purple discs and a few white discs of *sapisapi* (? Spondylus shell) are lashed on: also a few on the inner edge. On the other side of the specimen, the row of shell discs near the outer edge is incomplete; none on the inner edge. A pattern of two birds' heads with interlocking

Fig. 3.—Lime-spatula from New Guinea (about ⅓ scale.)
[Reproduced from Seligman, *Melanesians of British New Guinea*, fig. 40, by the courtesy of the Cambridge University Press.]

necks is carved on base of prong. The same pattern on the other side, only the scroll where the two necks join is slightly different.

Fig. 3.—Wooden lime-spatula (*gabaiera*) from Misima, Louisiades, described as follows by Seligman: *Melanesians of British New Guinea*, pp. 515–17 and fig. 40, p. 516. "The special "development of the lime-spatula shown in "fig. 40 is found in the Louisiades, where it is "called *gabaiera* at Misima and *nga* at Tagula "(Sud-est). For this and the following infor- "mation I am indebted to Captain Barton, who "collected the specimen figured as well as a very "beautiful example made of turtle shell. Pro- "bably this was made at Tagula, but most of "these objects are carved at Misima, the shell "discs being put on by the maker or added by the "purchaser at a later date. Small *gabaiera* are "used as lime-spatulæ, but such large examples "as that illustrated are held by women while "dancing, or possibly perhaps only by married "women. They also form part of the bride- "price upon Tagula and perhaps upon other "islands of the group."

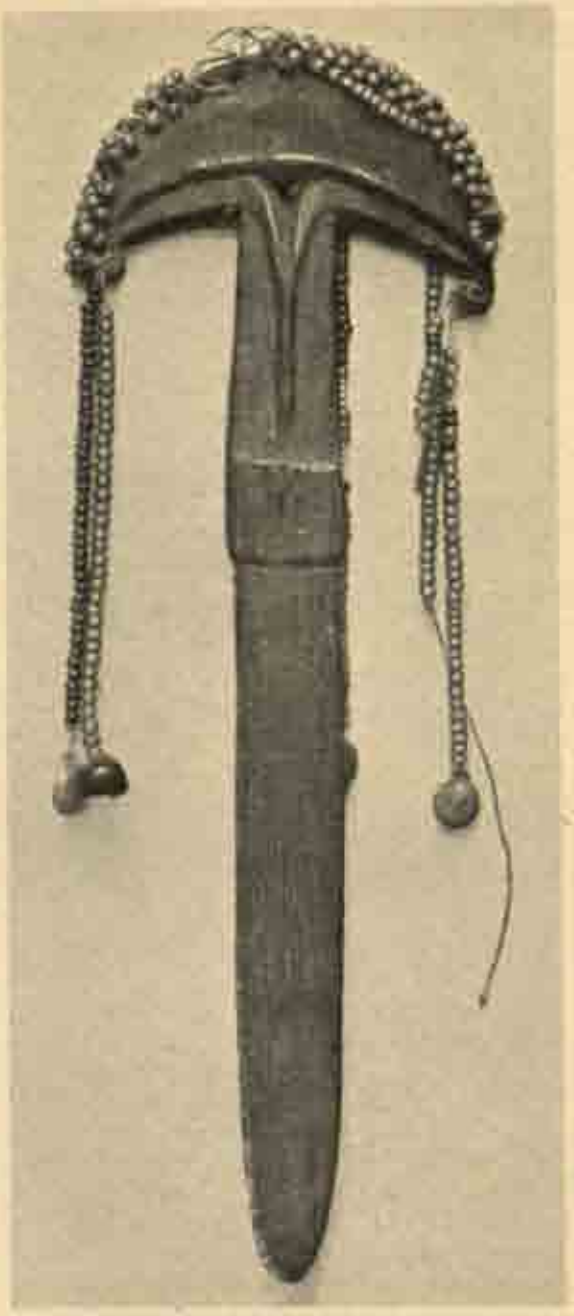


Fig. 4.—British Museum, 1931, 7.23.27.

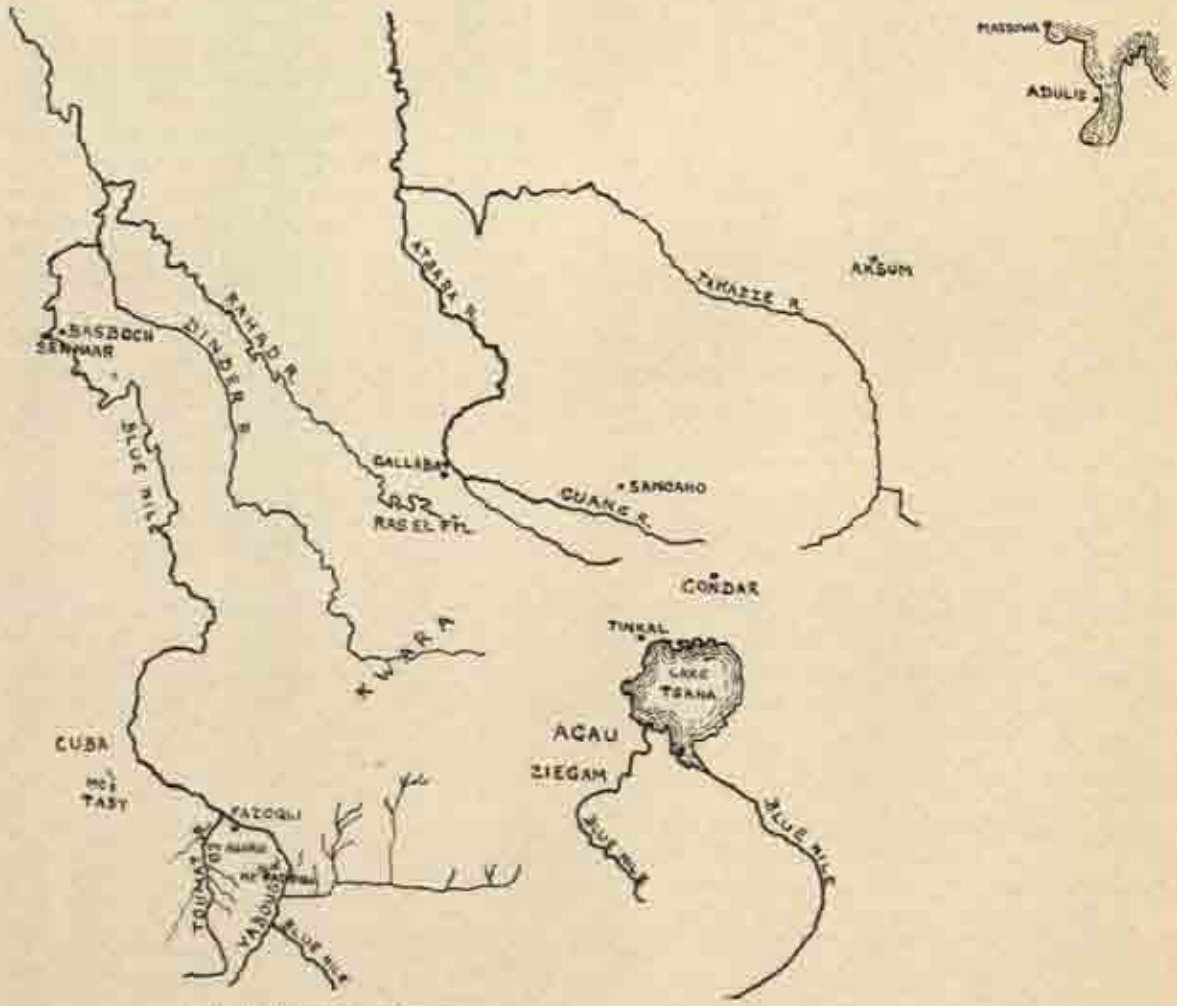
Fig. 4.—British Museum, Reg. No. 1931, 7.23.27:—Wooden lime-spatula, ornamented with red and blue glass beads and seeds. S.E. New Guinea. Collected and given by Sir Basil Thomson. Length, 10·5 inches. The carving is probably derived from two frigate-bird heads. See Edge-Partington: *Album*, Pl. 281, No. 3.

COSMAS AND THE GOLD TRADE OF FAZOQLI. *By G. A. Wainwright.*

30 The gold trade of Fazoqli on the borders of the Sudan and Abyssinia evidently goes back at least to the sixth century A.D., for when Cosmas Indicopleustes was at Adulis on the Red Sea coast just before A.D. 522 he heard of such a trade. He has left an account which is interesting from many points of view, and internal evidence makes it clear that it was the gold of Fazoqli that was in question. The following extract is taken from J. W. McCrindle, *The Christian Topography of Cosmas, an Egyptian Monk* (Hakluyt Society, 1897), pp. 52–54.[1]

"The country known as that of Sasu is itself "near the ocean, just as the ocean is near the "frankincense country, in which there are many "gold mines. The king of the Axômites ac- "cordingly, every other year, through the "governor of Agau (Ἀγαῦ), sends thither special "agents to bargain for the gold, and these are "accompanied by many other traders—upwards, "say, of five hundred—bound on the same errand "as themselves. They take along with them to "the mining district oxen, lumps of salt, and "iron, and when they reach its neighbourhood "they make a halt at a certain spot and form an "encampment, which they fence round with a "great hedge of thorns. Within this they live, "and having slaughtered the oxen, cut them in "pieces, and lay the pieces on the top of the

[1] The text was edited in 1909 by E. O. Winstedt.



SKETCH MAP OF A PART OF ABYSSINIA AND THE VALLEY OF THE BLUE NILE.

" thorns, along with the lumps of salt and the " iron. Then come the natives bringing gold in " nuggets (*χρυσίον*) like little lupins,[2] called " *tancharas* (*ταγχάρα*), and lay one or more of " these upon what pleases them—the pieces of " flesh, or the salt or the iron, and then they retire " to some distance off. Then the owner of the " meat approaches, and if he is satisfied he takes " the gold away, and upon seeing this its owner " comes and takes the flesh or the salt or the " iron. If, however, he is not satisfied, he leaves " the gold, when the native seeing that he has " not taken it, comes and either puts down more " gold, or takes up what he had laid down, and " goes away. Such is the mode in which business " is transacted with the people of that country, " because their language is different and inter- " preters are hardly to be found. The time they " stay in that country is five days more or less, " according as the natives more or less readily " coming forward buy up all their wares. On " the journey homeward they all agree to travel " well-armed, since some of the tribes through " whose country they must pass might threaten " to attack them from a desire to rob them of " their gold. The space of six months is taken " up with this trading expedition, including both " the going and the returning. In going they " march very slowly, chiefly because of the cattle, " but in returning they quicken their pace lest " on the way they should be overtaken by the " winter and its rains. For the sources of the " river Nile lie somewhere in these parts, and in " winter, on account of the heavy rains, the " numerous rivers which they generate obstruct " the path of the traveller. The people there " have their winter at the time we have our " summer. It begins in the month Epiphi of the " Egyptians and continues till Thôth, and during " the three months the rain falls in torrents, and " makes multitudes of rivers all of which flow into " the Nile."

On p. 66 we get Cosmas' commentary on the Greek inscription which he copied at Adulis. Here Sasu and its gold is mentioned again, as well as some information as to its position. On this occasion Cosmas says " *And to the places of* " *Sasu.* Note—The land of Sasu, where there is " much gold—that which is known as Tancharas, " is the remotest in Ethiopia. Beyond this, and " also beyond the country of the Barbareôtes, " the people who trade in frankincense, lies the " Ocean."

This account of Cosmas' includes a number of most interesting statements, which will be noted, but the purpose of this article is to show that it was the gold trade of Fazoqli of which he was telling. In the first place it is possible to trace the journey to the country of Sasu described as being " the remotest in Ethiopia." Coming from Aksum the royal agents and the merchants were under the protection of the Governor of Agau, and " the sources of the Nile lie somewhere in these " parts." Hence, Agau was then where it still is; on the west side of Lake Tsana. Here the people are still called Agaus, or Agows as some of the older travellers spell the name, and they speak a language completely different from Amharic and thought to be very ancient Hamitic. Dialects of this language are spoken by residuary tribes scattered about Abyssinia,[3] and in other parts it is the patois of the lower classes.[4] In the latter part of the eighteenth century Bruce reported that the Agaus " receive an immense " profit in gold; for, below these to the south " and west, is the gold country nearest to Abys- " sinia, none of that metal being anywhere found " in Abyssinia itself."[5]

In Cosmas' time the traveller to the gold-country from Agau found his road made difficult by " a multitude of rivers all of which flow into " the Nile." So, we find that the gold-country was somewhere near the upper reaches of the Nile, and, moreover, that caravans started out from the west side of Lake Tsana and then encountered many rivers that had to be crossed. This makes it quite certain that the traders' objective was the land of the Qamâmyl in Fazoqli through which flows the River Toumat on its way to join the Blue Nile. Fazoqli and the River Toumat are actually " the remotest in Ethiopia " for they are on the present-day frontier between Abyssinia and the Sudan.

[2] I have altered McCrindle's " peas " to " little lupins," the Greek word being *θέρμα* the diminutive of *θέρμος* " a lupin."

[3] Cust, R. N.: *The Modern Languages of Africa*, i, p. 131.

[4] Beke in *Proc. of the Philological Society* (1845), ii, pp. 91, 92; id., *On the Geographical Distribution of the Languages of Abessinia and the Neighbouring Countries* (Edinburgh, 1849), p. 3. A résumé of this will be found in Cust, *loc. cit.*

[5] Bruce, J.: *Travels in Abyssinia* (1790, 4°), ii, p. 432.

This can be deduced from the remarkable way in which the description of the journey in the sixth century tallies with that of Cailliaud and Ismayl Pasha at the beginning of the nineteenth, even though the approach was from a different direction. Both of these journeys were undertaken for the same reason. It was the lure of gold. Both accounts speak of the number of rivers crossed. Cosmas remarks on "the multi-"tude of rivers," while Cailliaud says that near the gold-washings "Des torrens multipliés ren-"daient notre marche extrêmement pénible."[6] Moreover, both describe the gold produced in almost the same words. Cosmas says it came "in nuggets like little lupins," while according to Cailliaud the local negro chief said that at the season of the rains pieces were sometimes found of the size of a kidney bean (d'un haricot).[7] On another occasion Cailliaud says the gold is sometimes found in fairly big pieces.[8] More than thirty years earlier Bruce had said that the Shangalla, *i.e.* the negroes of Fazoqli possess "gold in small pellets" with which they buy commodities from the Agows.[9] Naturally the washings also produced gold dust.

The centre of the gold-bearing district is the country of the Qamâmyl in the valley of the River Toumat, but the sands of the neighbouring mountains Aqarò, Fâkoumkom, Fâdoqah, and Tâby also produce a little gold. "There is not only more gold in the Qamâmyl country, but it is the best; that from other places being alloyed with silver and of a greenish yellow colour, or else with platinum when its colour is greyish yellow. The natives said that the gold-bearing region covered an area of only about twenty leagues.[10]

Cailliaud did not find a great deal of gold, and got the idea that there was not much to be obtained. In this he was unfortunate for Bruce reports large quantities originating thence. He is very emphatic that all the gold which comes into Abyssinia comes from the negroes (Shangalla) of Fazuclo (Fazoqli) on the west of Ras el Fil, and from nowhere else in spite of all that has been said to the contrary.[11] He also says that the Agows, who get their gold from the Shangalla, pay 1,000 ounces of gold as part of their tribute to the king of Abyssinia, and moreover the post of the official called 'the accountant of the Agows' is worth another 1,000 ounces.[12] Again, Banja paid its tribute in honey and gold, while Metakel and Zeegam paid theirs in gold only. All these are situated in the land of the Agows.[13] Sancaho paid 100 ounces of gold, and Ras el Fil, of which Bruce was made governor, and which was one of the markets for the Fazoqli gold, used to pay 400 ounces as tribute.[14] An Abyssinian described the Ras el Fil gold as being "as good "as any Christian gold whatever."[15] Kuara, a country to the west of Agau and north-east of Fazoqli was said to be "abounding in gold, not "of its own produce, but that of its neighbour-"hood."[16]

As has just been seen, at the end of the eighteenth century the Shangalla (negroes of Fazoqli) were still using "gold in small pellets" to pay for their purchases from the Agaus, and it is interesting to note that one of the things they bought with it was still iron,[17] just as it had been in Cosmas' day some twelve hundred and fifty years before. Similarly Fazoqli gold was still being exported to the Red Sea coast at the beginning of the nineteenth century. At that time the Sennaar merchants bought the gold at Ras el Fil and took it to Suakin. Thence it went to Jeddah, where it was given in payment for India goods.[18]

Thus, there can be no doubt that the gold trade which Cosmas was describing was that of Fazoqli,

[6] Cailliaud: *Voyage à Méroé, au Fleuve Blanc, au delà de Fazoql* (1826), iii, p. 12.

[7] *Ibid.*, p. 10.

[8] *Ibid.*, p. 18, "pépites d'un assez gros volume."

[9] Bruce, iii, p. 737.

[10] Cailliaud, pp. 2, 18, 19.

[11] Bruce, iv, p. 327. It is actually to the south-west, as indeed his map shows it to be. Sir Samuel Baker, *The Albert Nyanza*, i, p. 7, says that Ras el Fil is the modern Gallabat. Gallabat is still a great market place on the frontier between Abyssinia and the Sudan. Bruce, *loc. cit.*, says that the custom house was situated at Ras el Fil.

[12] Bruce, iii, p. 740.

[13] *Ibid.*, iii, p. 739.

[14] *Ibid.*, iv, p. 326. The statement that Ras el Fil appeared to be the principal market for gold is made by J. L. Burckhardt, *Travels in Nubia*, p. 309, and *cf.* Cailliaud, ii, p. 295.

[15] Bruce, iii, p. 365.

[16] *Ibid.*, iii, p. 259.

[17] *Ibid.*, *op. cit.*, ii, p. 432; iii, p. 737. Their other purchases besides iron were copper, beads, and skins. Unlike Cosmas Bruce does not mention salt, though this has been, and still may be, a commodity that formed the small change of Abyssinia.

[18] Burckhardt, *op. cit.*, pp. 309, 310. At Sennaar the ounce was worth 12 dollars; at Shendy, 16; at Suakin, 20; at Jeddah, 22 dollars.

and in the next sections it will be shown that the name Sasu which Cosmas gives to the country was almost certainly a miscopy of the name Kasu, Cush, the upper Nile country.

There has been much discussion as to the situation of the land of Sasu.[19] In discussing the shape of the earth Cosmas speaks of "the "frankincense country called Barbaria, lying "along the ocean, and not near but at a great "distance from the land of Sasu, which is the "remotest part of Ethiopia" (p. 51). Yet in his account of the gold trade Cosmas says it was "near the ocean," and again in his commentary on the Greek inscription which he copied at Adulis he says "Beyond this (*i.e.* Sasu), and also "beyond the country of the Barbareôtes, the "people who trade in frankincense, lies the "Ocean." On the other hand, he also says that "the sources of the river Nile lie somewhere in "these parts," and that on the road thither the traveller encounters "a multitude of rivers all of "which flow into the Nile." In this Greek inscription at Adulis the unnamed king says he reduced the nations "on the West to Ethiopia "and Sasu."[20] Hence, there can be no doubt that Sasu did lie to the west of Abyssinia. From this it follows that its rivers would flow into the Nile, and that it would be in "the remotest part "of Ethiopia" and "at a great distance from" "the frankincense country," *i.e.* Arabia and Somaliland and the Red Sea. Hence again, Cosmas' remark, which he makes three times (twice in the passages quoted and again elsewhere), that Sasu was "near the ocean" is hardly a mistake, but would be due to the ideas that were then current as to the Ocean and even to the sources of the Nile. The second statement, that in his commentary, that the Ocean lies beyond Sasu makes it clear that Cosmas envisaged Sasu as being somewhere near the Western Ocean. His mistake would lie in thinking that the frankincense traders also lived out there in the west, as well as on the Arabian coast. It is his mention of these as well as his omission to define the use he makes of the word 'ocean,' whether Red Sea and Indian Ocean or the Western Ocean, that has made students think of Sasu in terms of the Red Sea.

Others have thought of a country now called Susa to the south of Kaffa, which is itself on the southern confines of Abyssinia. Not only is it not to the west of Ethiopia, but on the contrary is due south, and would be as far away as the borders of Kenya and Uganda. A hundred years ago the journey from there to Gondar was so difficult and dangerous that arrangements had to be made by which priests could be saved the trouble of going there for their ordination.[21]

As a matter of fact the word Sasu is no doubt a miscopy from the Greek inscription of a word Kasu. Anyone who has copied an inscription will know how misleading the marks on the stone can be, how deceptive the lighting may be, and how easy it might be to copy a *K* as a *Σ* in a name one did not know. Having discovered a name Sasu, Cosmas evidently continued to use it for the country the real name of which was Kasu. This name, Kasu, is used by Aeizana in his Ethiopic inscription at Aksum in which he records his conquest of the Meroitic lands between the Takazze and the Nile.[22] Kasu is beyond Ethiopia and like the 'Sasu' of Cosmas it is to the west of it. Thus, Cosmas in fact tells us that the country whence came the "nuggets "of gold like little lupins called *tancharas*" was in Cush, the Meroitic country of the Nile lands. This information proves to be in consonance with the rest that we have been able to deduce as to the situation of that country, for it is there that Fazoqli lies whence comes "gold in small pellets" "the size of a kidney bean."

Having settled the position of Sasu-Kasu some paragraphs may be devoted to the other information contained in the passage. In the first place there is the question of the time taken by the caravan on its journey, which was six months for the journey to Fazoqli and back again. This seems excessive, yet as it was only sent out every other year instead of each year some weight must be attached to it. As Cosmas very rightly observes the cattle which accompanied the outward journey must have slowed down progress very greatly. But supposing the outward journey had taken four months, that would leave two

[19] For résumés of these discussions, see McCrindle, p. 63, note 1; p. 65, note 1; Winstedt, E. O.: *The Christian Topography of Cosmas Indicopleustes*, pp. 336, 337.

[20] McCrindle, p. 65.

[21] Krapf, J. L.: *Travels and Missionary Labours in East Africa*, p. 49.

[22] Littmann, E.: *Deutsche Aksum-Expedition*, iv, pp. 33, 34; Inscr. xx, ll. 4, 28, 36. Glaser had already realized that Sasu must in some way have been intended for Kasu.

months for the hurried return. Bruce seems to have taken only twenty-nine days of actual travelling apart from stoppages on his journey, which was one of some distance, from Gondar to Basboch on the Nile opposite Sennaar.[23] But then his road was not obstructed by a multitude of rivers.

Considerable inquiry has not resulted in any satisfactory derivation for the word *tanchara*, which Cosmas uses for the nuggets of gold like little lupins. Winstedt, p. 337, quotes Lagarde's remarks on the word.[24] It occurs once elsewhere as τάγχουρος, which the scholiast to the passage says means 'gold,' and adds that it is 'the Persian word.' However, a long search through modern Persian, Zend, and old Persian dictionaries has produced nothing like it. Lacroze, whom Lagarde quotes, is therefore no doubt right in considering this statement to be a mistake. Lagarde's further reference to the Arabic *tankār* is not helpful, for that means 'borax,' and is found in Persian and Turkish with the same meaning, and again in English as *tincal* meaning 'crude borax'.[25] We come nearer with the word *tănděkăr*, which is so rare that it occurs only once in the Ethiopic Bible, *i.e.* in Job, xxviii, 19. There it is used to translate the Hebrew *pitdah Kush*, which the Septuagint renders by 'topaz of Ethiopia.' Topaz from the island in the Red Sea is indeed of a beautiful transparent golden colour. Dr. L. D. Barnett kindly tells me that the word might be derived from the Semitic root *n-q-r*, and could then correspond to the Arabic *naqrah* which has 'an ingot of molten metal' for one of its subordinate meanings. But in this case the 'q' would have been changed to a 'k,' which is not as it should be.

There remains the possibility of *tanchara* being a word from the language of the negroes of Fazoqli from whom the nuggets of gold came. To-day there are two words in this language for gold, *hoda* (*hota*), and *wahuadi*,[26] but since Cosmas' day the language has probably been changed by the Shilluk invasion at the beginning of the sixteenth century A.D. Words of similar form to *tanchara* are liable to occur in Fazoqli and its neighbourhood. Thus, in Gonga to the south of the Blue Nile in Abyssinia gold is called *uncho*,[27] which may have to do with *tanchara*. Further, in this direction we have a mountain named Tankaru, and at the north-western corner of Lake Tsana, a town called Tankal. Tankal was, therefore, at the northern end of Agau, and on the road from Aksum to the gold-country. At the southern end of the lake the negroes of Agau-mider call gold *barubera*,[28] which is the same type of formation as *tanchara*, and in the Fazoqli language itself there is a word *tingalo*, which is practically the same formation as *tanchara*. But beyond showing this it is of no use to the present argument, for it does not mean 'gold,' but 'to chew.'[29] Perhaps research in some of these African languages will be more fruitful in results than anything yet attempted.

Cosmas provides yet another account of the well-known dumb trade. Herodotus, iv, 196, is the standard instance. On that occasion it took place on the West Coast of Africa, and there, as in Sasu-Kasu, the natives paid for their purchases in gold. There is also an account in *The Periplus of the Erythraean Sea* of what reads like the same type of trade in China, where it is malabathrum that the natives bring.[30]

The import of salt at so early a date is interesting. There has always been a need for that condiment in the interior of Africa, and in some tribes it has been the perquisite of the king, only to be presented on occasions to a favoured few. In Abyssinia blocks of salt have even had a currency value, forming the small change of the country.[31] The value of each was twopence.[32] In telling his life-story a slave said that he had been sold from hand to hand until at last he came into the possession of the king of Shoa. He was sold first for 40 pieces of salt, then for 60, then for 80, then for 100, after that for 12 dollars,

[23] Bruce, iv, pp. 272-429.

[24] Lagarde, A. P. de: *Reliquiæ Juris Ecclesiastici Antiquissimæ* (Graece edidit), pp. ix, x.

[25] Presumably also the Sanskrit *tankana*, which also means 'borax.' Monier-Williams, *Sanskrit-English Dictionary*, p. 429, cols. 2, 3.

[26] Heepe in *Mitt. Seminars orientalischen Sprachen*, xxxi, Dritte Abt. pp. 213, 221.

[27] Beke in *Proc. of the Philological Society* (1845), ii, p. 101.

[28] *Ibid.*, *loc. cit.*

[29] Heepe in *op. cit.*, p. 221.

[30] Schoff, W. H.: *The Periplus of the Erythraean Sea*, pp. 48, 49, §65. In his note to this passage on p. 251 Schoff quotes yet other examples from antiquity.

[31] See for instance, Bruce, iii. pp. 736, 737; Paulitschke, *Ethnographie Nordost-Afrikas*, p. 317.

[32] Stern, H. A.: *Wanderings among the Falashas in Abyssinia*, p. 307.

and finally for 14 dollars.[33] Just at the time that Cosmas was recording the importation of salt into Abyssinia, the Bushongo tradition tells of the discovery of a method of making it far away to the west on the Shari River near Lake Chad. It was done by burning certain plants and using the ashes.[34] For this thanks were due to the wife of the great culture-hero Woto, who was a mulatto and was reigning about A.D. 510, as has been computed from the national king-list.[35]

The "encampment, which they fence round "with a great hedge of thorns" is the *zaribah* of modern times, which is still made in the same way.

Cosmas' remarks about the winter and the rainy season in Sasu-Kasu are so inaccurate as they stand, and yet so right, that there must be some explanation. It is to be found in the preconceived notion, which he of necessity had, that the rain comes in the winter. Indeed, he expresses it three times when he speaks of "the "winter and its rains" and "in winter on account "of the heavy rains" and "during the three "months (of winter) the rain falls in torrents." In Alexandria whence he came, of course, the rain does come in winter, but in Abyssinia the climate is quite different. Cosmas' mistakes about the weather and the seasons in Sasu-Kasu become intelligible when viewed in this light. As a matter of fact his statement falls into two parts, each of which is composed of a correct observation and a mistaken deduction. On top of this there is an implication which is merely a muddle.

In the first part Cosmas says that "the people "there (in Sasu-Kasu) have their winter at the "time we have our summer." As no part of Abyssinia even reaches the Equator, this statement requires explanation. If, however, we realize that he would have thought of 'winter' as the rainy season, which it is in Alexandria, this part of his account is found to be correct. In Fazoqli both Cailliaud and Bruce say that the rainy season begins in April, and it lasts five months according to Cailliaud,[36] or eight months according to Bruce,[37] *i.e.* till August or November. If we may split the difference between them, we could say that it normally lasts to about the end of September or beginning of October. Thus, we find that the rainy season in the gold-country, which Cosmas presumed to be the winter as it is in his own Alexandria, does correspond very well to the Alexandrian summer. This also begins at the end of April and lasts to early October.

In the second part of the statement Cosmas says that "It (the winter) begins in the month of "Epiphi of the Egyptians and continues till "Thôth and during the three months the rain "falls in torrents." Here again his preconception of the identity of the winter and the rainy season has led him astray, for modern observation shows that in Abyssinia the two are separated. Thus, a general statement of weather conditions for Abyssinia as a whole says that the "winter, or "the cold season, lasts from October to February," and "the rainy season proper, caused by the "south-west monsoon, lasts from June to mid-"September." Coming nearer to Fazoqli, in the region of the Sobat sources, for instance, the rains begin earlier than June,[38] and in Fazoqli itself, as has just been seen, they are said to begin as early as April. Thus, there is an intermediate season beginning in February which varies in different parts of the country from about two to four months in length. Hence, Cosmas' estimate of three months for one of the seasons in Abyssinia is a very fair one. But unfortunately for him it is neither wintry nor rainy, but it is the dry, hot season. However, Cosmas is not only

[33] Kapf, J. L.: *Travels and Missionary Labours in East Africa*, p. 51.

[34] Torday and Joyce: *Les Bushongo*, pp. 22, 23. This art of salt-making was part of a great culture-complex which the Bushongo received during Woto's reign, including the knowledge of iron-working, the practice of circumcision, the use of individual personal names, and the trial by poison, pp. 21, 37. Packets of salt are used as currency by the Bakongo, p. 94. For an intertribal in salt, *see* pp. 94, 134, 268. For the improved art of preparation, *see* pp. 134, 275, and for the legend of how this improvement was discovered, *see* p. 236. For a detailed description of this method of preparing salt and of the product in the Kasai-Lukenye region, *see* J. Maes, *Notes sur les populations des bassins du Kasai, de la Lukenie, et du lac Leopold II*, pp. 105–118. In Abyssinia the people of Tigré, and more still the Danákil, are the great salt-makers. They get the salt from Lake Assál, and export it in packages of 3½ kgms. P. Paulitschke, *op. cit.*, p. 234. Lake Assál is in the direction of Adulis. Is this where Cosmas' salt came from? In Somaliland the natives of the far interior use the ashes of salty plants. *Ibid.*, *loc. cit.* In East Africa the Jagga soak a salty earth in water and use the resulting brine, Krapf, *op. cit.*, pp. 244, 245.

[35] Torday and Joyce, *op. cit.*, pp. 21, 37.

[36] Cailliaud, III, p. 56.

[37] Bruce: *Travels in Abyssinia* (1813, 8°), vii, p. 111.

[38] *Encyclopædia Britannica*, eleventh edition, s.v. *Abyssinia*, p. 85.

right about the length of this season but also about the months that he gives to it; Epiphi, Mesore, and Thôth. For in A.D. 522 Epiphi 1st fell on 15 February and the last day of Thôth fell on 21 May,[29] while the intermediate season in Abyssinia runs from February to something after April.

Finally, though he does not definitely say so, his text includes the extraordinary implication that the summer at his own city of Alexandria lasted from Epiphi to Thôth, *i.e.* from the middle of February to the end of May. This is an egregious mistake, for he must very well have known that the Alexandrian summer runs from the end of April to the end of September or early October. Presumably he either did not notice the discrepancy, or else his basic confusion having led him into such a muddle he finally left the statement to stand as it was. But fortunately this does not invalidate his information about the times and seasons in Abyssinia.

Thus, it has become evident that Cosmas' account of the gold trade of Sasu is actually one of the gold trade of Fazoqli on the frontier between the Sudan and Abyssinia. It is also clear that iron was one of the imports which the natives of Fazoqli received in return for their gold. This will be dealt with in a companion article.

Though they do not concern us here, it may be noted that Bruce gives further details about the gold deposits in Vol. VII of the 8° edition of 1813. On p. 109 he says that in Fazuclo and on the River Yabous "the gold is all found in "red earth: wherever that is, is gold; wherever "that is not, is none." On p. 111 he repeats that gold is found in red earth, and adds that the people wash for it. "It is nowhere found in "mines."

He gives another scrap of information about the gold trade on p. 212 of Vol. IV of the 4° edition of 1790, where he says that the Abyssinians wrap up their ingots of gold in silk paper.

[29] The Egyptians reckoned in a year of 365 days instead of 365¼. Hence, their calendar retrograded through the seasons at the rate of one day *every four years*. The year of Cosmas took place in A.D. 522, or 383 years after the era in A.D. 139, making the recession to be 96 days. As Epiphi 1st ought to fall on 22 May, it would have fallen 96 days earlier in A.D. 522, *i.e.* on 15 February, and the last day of Thôth would have fallen on 21 May. McCrindle, p. 53, note 2, makes the statement that Epiphi to Thôth represents July to September. However he may have arrived at such a result it is not correct, the calculation being as above. Winstedt makes no attempt to define the period.

SOME PRELIMINARY NOTES ON MERU AGE GRADES. *By E. Mary Holding. With Diagram on pp. 60-61.*

31 Of the Kenya tribes the best known are the Masai, the Kikuyu, and the Kamba. There is very little literature dealing with the tribes living on the Eastern and North Eastern slopes of Mount Kenya, though some study has been made of the Embu-Chuka-Mwimbi peoples by Orde Browne, and of the Tharaka, by Lindblom, Champion, and Dundas. To the north of the Mwimbi and Tharaka, near neighbours also of both the Kikuyu and Kamba peoples, are to be found the Meru-speaking peoples, numbering roughly some 150,000. Their tribal organization contains many elements common to the Kikuyu, and shows also some evidence of Masai influence. So far as I know, the only published work dealing with the ethnology of the Meru people is C. W. Hobley's study, *The Akamba and other East African Tribes*,[1] which contains a short chapter on 'the Mweru.' A more recent unpublished study by Mr. W. H. Laughton[2] is limited to a study of men's institutions, and the whole field of women's institutions and activities remains untouched. The present article will describe the system of age groupings among the Meru, supplementing Mr. Laughton's material with information about the women's groups and their function within the society.

The present tribal organization of the Meru is said to date back to the time when they migrated from a place known as Mbwa, somewhere towards the East, on the other side of the Tana

[1] Cambridge University Press, 1910.

[2] *An Introductory Study of the Meru People.* Unfortunately it has not been possible to obtain the author's permission to quote from this manuscript, to which I am greatly indebted.

river. Legend has it that the Meru were there in a state of servitude and suffered persecution at the hands of their overlords.

An interesting feature of the present organization of the tribe is the existence of the numerous sub-divisions, which, in the absence of a powerful hereditary chieftainship, supply the need for leadership and co-operative effort. The tribe is divided by kinship into clans and families, and geographically according to localities. The three main geographical divisions are Igembe, Imentī, and Tigania. Igembe is the section to the north, including the Jombeni range. Tigania is the section in central Meru, from the foothills of the Jombeni range to the forest belt. Imenti is the southern section on the other side of the forest belt. Each of these is sub-divided into smaller local groups. Mr. Laughton gives a list of 86 such local groups together with the names of clans living there. Each area regarded as a unit is generally the home of several clans, and clans within any area appear to be restricted to that area. Many of the clans have myths of origin, some of which indicate that they were totemic.

In addition to the geographical divisions and the clans, there are three other divisions known as Anjiru, Njeru, and Ntune. These mean respectively, the black people, the white, and the red. Informants say the names originated at the time their forefathers left Mbwa. In the course of their flight they had to cross a wide river bed. The people who call themselves Anjiru are said to be the descendants of those who crossed the water during the night, while Njeru are the descendants of those who crossed during the day, and Ntune of those who crossed at daybreak. These names appear to have little significance nowadays except that in giving his clan-name a person will sometimes add that he is Anjiru, Njeru, or Ntune. There is, however, considerable pleasant rivalry between members of the various groups. Quite recently I witnessed a dancing competition between the girls of Anjiru and Njeru.

The most significant feature of the Meru tribal organization is the intricate system of age grades which cuts across family and clan loyalties, and which originally provided both the group of warriors who were responsible for the defence of the country and the group of elders who had administrative power. As among the Kikuyu and Massai, there are circumcision groups. Men circumcised within a certain period of time are considered to belong to the same generation or *uthuki*. Each generation has its own name, given at the time of entry to the warriors' dormitory (*gaaru*). From the time of leaving Mbwa up till 1938 there have been 10 *uthuki*. Another set which had been conducting circumcision ceremonies for a number of years is now complete and has been given a name. Omitting this last, whose name I do not know, the six previous age groups are Kiruja, Miriti, Murungi, Kiremana, Kaburia, and Kobai.

The term *uthuki* is also used in reference to two larger units—Ntiba and Kiruka. There is always one age group which has responsibility for the administration of the country and which will be either Ntiba or Kiruka. Some members of this group from each clan comprise the elders' council (*kiama*), which has judicial power. The age group succeeding the elders who are in power consists of young married men, who are called *aruau*. This is really a term of contempt, but by courtesy they are called elders. They in turn are succeeded by the group of warriors who are serving their term of defending the country. The elders in office regard this group of warriors as belonging to them, and for a period of about ten years the warriors have active responsibility in the defence of the country, while the elders have administrative responsibility. If the officiating elders are *ntiba*, the warriors are *ntiba*. Likewise the group succeeding the elders (*aruau*) will be *kiruka* and that succeeding the warriors (*ntani*) will be *kiruka*. This can be illustrated from the last few age groups: the present warriors are *ntiba*; *kiruja*, now married men, are *kiruka*; *miriti*, now elders, are *ntiba*; *murungi*, now ex-elders, are *kiruka*. The significance of the groups *ntiba* and *kiruka* can be best understood in relation to the ceremony of *ntuiko* which takes place about every ten or twelve years, and which regulates the period of office or service covered by each age group.

The date of the *ntuiko* ceremony is decided by the elders. Before the advent of British administration, it was accompanied by a dramatization of war. When the elders had been in office ten or twelve years, and the warriors had completed the same period of service, the noviciate warriors would try to drive out the warriors from their dormitory. Assisting the noviciate warriors would be the noviciate elders, and with the

MERU AGE GRADES

Approximate age		Ceremonies marking stages in life of individual		Descriptive terms for individuals at various stages	
New born baby				*Rukenke*	
First week		*Kugwarira mwana* (uncovering the child) *Kuumaaria mwana* (taking out the child)		*Gakenke*	
Second year (weaning)		*Kwenja neiuri via kiinda* (shaving the first hair)		male *Kaiji*	female *Gakenye*
7 years (second teeth)					
14 years (approx. puberty)		*Guturo mato* (piercing the ears)		*Mwiji* (*see* col. 8)	*Mukenye*
male	female 16	male	female *Gukuruma nkuuro* (tattooing the body)		
	17+		female *Mpano*		
18	17+	Initiation Seclusion		*Ntoni Muthaki* (*see* col. 8)	*Ngutu*
28	18	Marriage	female Rites concerned with pregnancy and birth of first child	*Muromi*	*Muciere*
38–40	28–30	*Mwithio* (feast of millet beer) *Kuhia Ntuto* (feast) *Kuperia anne matu* (testing the children's ears) Initiation of first born		*Mukuru* *Mukuru*	*Mwekuru* *Mwekuru*
50+	40+	Initiation of youngest child		*Mukuru*	*Mwekuru*
60+	50+			*Ntindiri*	

MERU AGE GRADES

Ceremonies marking stages of advance of age group		Age group names		Tribal divisions
male	female	male	female	
Kugura kigumi			Referred to as belonging to *buuru ya ntiji* (*see* col. 3, *muiji*)	
Ulinguri *Gatuuri* (secret society)	*Kugura ukenye* (buying girlhood)		Referred to as belonging to *buuru ya nthaka* (see col. 3, *Muthaka*)	
Kuuma Kiama gia Romare (go through warriors' council)				*Kiruka*
		Kiruja	(?)	*Ntiba*
Kuuma Kiama gia Nkomango *Kuuma Njuri Ncoke* *Gukurukia ruuga nyu* (feast for age mates) *Rurangi* (feast for age mates)	*Kiama gia Nimya* *Kagiri ga Ntijio* ?	*Miriti*	*Ncerenga*	*Kiruka*
Joins elders of priestly grade	Joins group past child-bearing, participates in religious ceremonies	*Murungi*	*Tirindi*	*Ntiba*
		Kiremana Kaburia	*Ncurubi Muniangu*	*Kiruka Ntiba*

warriors would be the elders who had completed their term of office. When the noviciate elders and warriors had driven out their opponents, the defeated elders and warriors would agree to resign in favour of their conquerors, who would come into power. Each age group would then advance to a further stage. A feast would be prepared for the noviciate warriors, at which they would be given their age group name. The name chosen generally had some topical allusion to events which had recently taken place, or to exploits of the particular group. The ex-warriors were expected to retire from the warriors' dormitory and set up their own homesteads. Those who were formerly *arua* would become noviciate elders, and after the fulfilment of certain obligations would be admitted to the elders' council.

These circumcision groups appear to correspond to the *riika* of the Kikuyu, and the *poror* of the Masai. There is, however, an important difference between the Meru and the Kikuyu system. According to Kenyatta,[1] the Kikuyu *itwika* ceremony only took place about every thirty years. It looks as if the Meru have been to some extent influenced by the Masai. It is interesting in this connexion to notice the greetings used between women of the respective groups *ntiba* and *kiruka*. Women of *ntiba* greet one another, *ciobagine*. The sign of *ntiba* is a goat, the name for which is *ngine*, and is said to be of Masai origin. Hence the greeting, *cio-ba-ngine*. Likewise the sign of *kiruka* is a sheep, and the word for sheep, also of Masai origin, is *nguri*. The women of kiruka use the greeting *ciobaguri*.

The age group system can be most readily understood by considering the relation between the ceremonies which mark the stages in the life of an individual, and those which mark the initiation of an age group. This is what I have attempted to do in the attached table. Every individual, as he or she grows up, passes through various stages of tribal life. From infancy onwards, certain physiological stages are marked by ceremonies which give the individual new status within the society.

Notes on the Chart (pp. 60–61).

The first column in the chart shows the approximate stages at which the ceremonies took place in pre-European times. The average age at marriage is now considerably younger owing to the cessation of warriors' activities, and the circumcision age is also lower. The sixth and seventh columns give the ceremonies and procedure which mark the advance of an age group.

Stages of Advance of Age Group.

In addition to the ceremonies which mark the individual's change of status, there are other ceremonies for which some initial payment generally has to be made, which admit the individual, in company with his or her age group, to the responsibilities and privileges of the next group. The two sets of ceremonies are interrelated, but should not be confused.

Boys' Age Groups.

Young boys and girls both have their age groups, and while these have no significance after initiation, they are interesting in that they foreshadow the later stages of adult life. Mr. Laughton refers to three tests which the young boys have to undergo :—

(1) *Kugura kigumi* ('buying *kigumi*').—This takes place when the boy is considered old enough to leave his mother's hut and go to sleep with his father. The payment for admittance to this stage is a piece of chain long enough to reach from the neck to the knees of a big boy. In addition the boy is made to 'buy *kigumi*,' i.e. to submit to a beating by some of the older boys and the warriors.

(2) *Ndinguri*.—In order to be promoted to this stage the boy must provide a feast for the older boys, after which he is regarded as an older boy.

(3) *Gatuuri*.—This, like *kigumi*, consists of a beating, but unlike *kigumi* is regarded as entrance to a secret society. Members claim to have the power of witchcraft.

Girls' Age Groups.

In his manuscript Mr. Laughton refers to the existence of girls' and women's age groups, but most of his informants were men, and the tendency of Meru menfolk is to minimize the significance of women's institutions. This may be due either to ignorance of their function or to a desire to maintain secrecy about them, for fear of incurring the wrath of the women's council. In writing about the Kikuyu, Kenyatta refers to a system of age grouping among girls and women, which is

[1] *Facing Mount Kenya*. J. Kenyatta. Secker and Warburg, 1938.

parallel to that among boys and men. Again, both Hobley [1] and Kenyatta refer to a women's council among the Kikuyu, but neither of these writers describes the function of women's age groups and their significance in the society. My own investigations among the Meru women have convinced me of the existence of girls' and women's age groups, which are almost parallel to those of the men. They are to some extent subservient to those of the boys and men, but nevertheless have their own definite place in Meru society.

My informants told me that there are girls' groups corresponding to those of the small boys referred to above. Each of these has its own name. While boys purchase their admittance to the next age group by trials of ordeal, the test for girls lies in the proof of culinary ability, foreshadowing the time when it will be their responsibility to prepare food for important tribal ceremonies.

Kugura ukenye.—The first important stage for a group of girls is when they are admitted to the group of senior girls, who are considered to belong to the *buuru* of the warriors. An African informant explained this term as follows: "Among "the Meru it is the custom to build dormitories "(*gaaru*) for the warriors of each clan. Each "dormitory has its own name. If a warrior goes "away from home to a district where he is not "known, he will be asked, 'To which *buuru* do "'you belong!' The meaning is, 'To which "'*gaaru* do you belong!' In the same way, if a "girl is friendly with a warrior of a certain *gaaru*, "she will be referred to as a girl of the *buuru* of "so and so."

When the nubile girls are about to be circumcised, the age group succeeding them make preparations for the ceremony of 'buying girlhood.' This appears to be parallel to the *ndingiri* test of the boys. A feast of porridge and vegetables is provided for the older girls. After the feast there is dancing, during which each girl who has provided half a calabash of food is given one of the special girls' names, and at the same time the whole age group is given a name.

Until they have passed through this ceremony the girls associate with the young men and are known as the girls of the *buuru* of the young men. Afterwards they are allowed to associate with the warriors. Originally it was from this group that the warriors selected their future wives. Thus the age grade system not only provided the group of warriors who defended the country, it also provided the group of girls who would ultimately become their wives.

The respective ceremonies for boys and girls are put side by side on the chart, but it should be noticed that the uninitiated girls associate with the warriors. Thus there may be considerable discrepancy between the marriage ages of men and women. The woman gets married immediately the period of seclusion following initiation is over, while for the man there follows the period of warrior service during which he is not expected to get married.

Adult Age Groups and the Working of Councils.

After marriage, a woman is considered to belong to the same age group as her husband, in spite of the difference in their ages. Thus a woman who marries a man of *Miriti* is regarded as belonging to that group. There are, however, *nthuki* names for the women, corresponding to the various men's age groups. For instance,

The wives of *Miriti* are called *Nceceng'a*:
" " " *Murungi* are called *Tirindi*:
" " " *Kiremana* are called *Ncuruhi*:
" " " *Kaburia* are called *Munyange*.

The married people, men and women, are divided into three main groups:

(*a*) Young married people with one or more small children.
(*b*) Those whose eldest child is ready for circumcision.
(*c*) Those whose children are all circumcised.

(*a*) The men of this group (*aruau*) have relinquished warriors' duties and for a period of ten years or more are free from responsibility either in the protection or administration of the country. They may attend meetings of the men's council (*kiama*) but have no authority. Their wives also have no authority among the women. They are allowed to attend other women at childbirth, not in an official capacity but as learners. They are also responsible for the preparation of food at the circumcision feasts.

(*b*) This is the important group and the one which is in power. When the new warriors enter the *gaaru*, the *aruau* prepare to come into power. After making numerous payments to the group

[1] *Bantu Beliefs and Magic*. London (Witherby), 1938.

who have completed their term of office, the latter agree to pass them through *kiama*, and initiate them into the traditional lore of the elders.

Kiama gia Nkomango.—In each district, shelters are built, and instruction is given to the novitiates, relating to the preservation of traditional law and custom for the benefit of posterity. At the same time, a few outstanding leaders, from the age group succeeding them, are instructed. All who have been initiated in this way are considered to belong to the *Kiama gia Nkomango* ('Council of stone'). These men are now eligible to be elected to the *Kiama gia Njuri Ncekc*, which is the selected body exercising judicial power. But while initiation to *Kiama gia Nkomango* is for the whole age group, that to *Njuri Ncekc* is optional. The entrance fees are very heavy; thus membership is limited to a few outstanding and influential people, and those recognized by their clansmen as spokesmen (*agambi*).

Kiama gia Ntonye.—The wives of the men who have passed through *Kiama gia Nkomango* are responsible for imparting traditional knowledge to the younger women of the tribe. They too are initiated as a group to the women's council, called *Kiama gia Ntonye* ('Council of entering in'). The women initiates are instructed by the age group preceding them. Instruction includes details connected with the *Ntuto* feast, which is the preliminary step preparatory to the circumcision of the eldest child. As among the men, there is also among the women a selected group of leaders who make up a smaller council. For her initiation to this, a woman depends first on the status and wealth of her husband. A feast must be prepared for the members of the smaller council, before she can be admitted to their group. Secondly, the women say she must have shown proof of her willingness to co-operate in women's affairs, and be recognized as an obedient and dutiful wife. I am not sure if it is possible for a woman to be elected to this smaller council in her own right, or whether the wives of members of *Njuri Ncekc* are automatically regarded as the most suitable candidates. Again, I am not sure of the name of this smaller council. There is a body of women who are known as *Kegiri ga Ntijio* ('Circle of Crones'). At girls' initiation ceremonies these women form a close circle round the girl just prior to the operation.

Mr. Laughton regards the men's *Kiama gia Njuri Ncekc* as "a court of arbitration, to maintain peace at home, in the conduct of family affairs and in the disputes between individuals." As far as I have been able to discover, the function of the women's council falls under four main heads:

1. To provide and prepare the food for the *Ntuto* feast and on other ceremonial occasions.
2. To settle minor disputes between individuals, and to deal with offenders against traditional law. In cases when there was a denial of guilt it was the custom for the council to resort to a test called *kuthungutha nkindwa* (jumping the *nkindwa*). The defendant and accused prepare porridge, which is given to the members of the council. After drinking the porridge, the old ladies settle down to judge the case. One old lady puts her body belt (*kamwaitangu*) on the ground. The accused are asked to jump over it. It is believed that if anyone who is guilty does this she will die.
3. The initiation of girls, and the operation which accompanies it are the responsibility of the women's council, from which the women circumcisers are chosen. Just as the men belonging to the set in power regard the warriors as belonging to them, so the women who are in office consider the girls who are ready for circumcision to belong to them. This is evident from the song they sing at the close of the circumcision ceremony. In 1938, when Tirindi were in power, they used to come away from the ceremonies singing.

   Irigu riguciara kimomonto
   The banana has borne an enormous child
   Irigu ria mnko wa Tirindi
   The banana of a woman of Tirindi
   Riguciara kimomonto
   Has given birth to an enormous child.
4. The members of the women's council have a part to play in certain religious ceremonies. When the rains fail, or at times of pestilence, the women collect the sacrificial sheep and present them to the elders. When calling the women together, the leaders sing,

   Ciomnka wri nja
   If any woman is at home
   Ndamwijiira kwimba itende
   I will cause her to swell at the ankles.

(c) These are the people who have completed their term in office and whose children are all circumcised. They are mainly concerned with

responsibilities for religious ceremonies, as it is the men of this group who make the offerings at the tree shrines. The women participate in the ceremonies connected with drought or pestilence. Both men and women of this group still attend the respective councils, but they gradually take a less and less active part. In spite of the apparent rigidity of the age grade system, it is interesting to note that while it provides the successive groups from which the main body of the men's and women's councils are selected, the councils themselves cut across age grades. For instance, the men's *Kiama gia Njuri Ncke* includes some outstanding members of the age group succeeding the one in power, some members of the age group in power, and some elders of the senior age group.

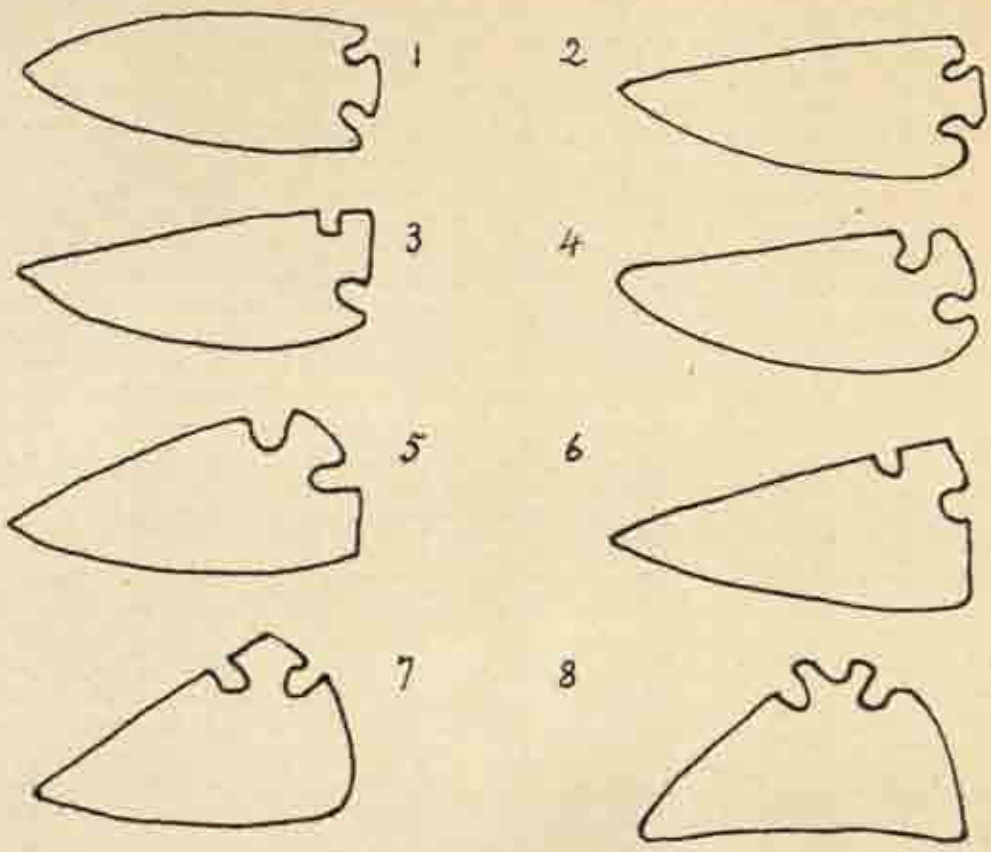
These notes describe the social organization as it is at the present time. Although the warriors no longer defend their country, the elders have been enlisted to assist in administration under the system of Indirect Rule. The importance of the women's groups lies chiefly in the field of education and of public health work, and further research work is needed to see how the women's councils carry out their duties on traditional lines and how they can be adapted to provide general welfare work on modern lines.

THE NORTH AMERICAN TANG-KNIFE. *By Dr. E. B. Renaud, Department of Anthropology, University of Colorado. Illustrated.*

32 In MAN, 1941, 3, Dr. F. B. Steiner wrote on "Some Parallel Developments of the Semilunar Knife." Among his illustrations, fig. 5 represents a "stone blade with two knobs" from the Japanese neolithic, reproduced from fig. 35, 10, of H. C. Munro's *Prehistoric Japan*. This specimen seems to me closely related, typologically speaking, to a series of flaked stone artifacts variously called, at first, "ceremonial knives," "specialized knives," "fish knives"; later and probably better, "notched knives," "tanged knives," and "corner-tang" artifacts, when including other implements together with knives, but displaying the same peculiar mode of hafting.

The first reference concerning a "corner-tang" knife found in the American scientific literature dates back to 1897. It is a picture of such a specimen from Texas published by Thomas Wilson [1] (fig. 19, Plate 39). The second I found in Moorehead's *Stone Age in North America* [2] (p. 159, Vol. I). In the course of the Archæological Survey of Eastern Wyoming, which I conducted during the summer of 1931, came to my hands a splendid artifact, which I called a "ceremonial knife" because of the perfection of its shape and finish, the lack of traces of hard use, and the fact that this type was then considered very rare. In my 1932 report [3] (pp. 51–54) I described this specimen as follows: "Its general shape is subtriangular, with slightly "convex sides. It measures 102 mm. in length, "60 mm. in maximum breadth, and the thickness "does not exceed 6 mm., which is relatively thin "for a piece of that size. It is a biface implement "which has been broadly flaked by percussion "and the edges have been made sharp and "regular by means of fine pressure retouches. "The two long sides are almost perfectly sym-"metrical. The point is not sharp but somewhat "rounded. The heel is round and slopes in, thus "rendering the back line shorter than the working "edge. At the upper right-hand angle of the "specimen, two notches form a short stem, "15 mm. wide, apparently made to allow hafting, "although the nature and shape of the handle "are unknown. This remarkable artifact had "been found in 1890, 20 feet below the present "surface, in a thick hematite bed formerly used "by the Indians of the region as a source of red "pigment."

In the same report I briefly described half-a-dozen other knives, of the same general class, but all with individual peculiarities of shapes, position of the stem or tang, and dimensions. Four of these specimens came from Colorado as well as that previously reported by Moorehead; two others were from South Dakota. I also called attention to one illustrated by Calvin S. Brown in his *Archæology of Mississippi* [4] (fig. 58), and another found in Rhode Island and figured in Moorehead's book [2] (fig. 143). These authors remarked that such artifacts are "unusual, rare, and of difficult classification." In spite of this, I



noted their being widely scattered, and stated the need for further research in order to establish their distribution and purpose.

Four years later, in May, 1936, J. T. Patterson, of the University of Texas, published a booklet entitled *The Corner-Tang Flint Artifacts of Texas*.[5] In it the author reports on 533 specimens coming from more than seventy counties, but principally from the central region of the state. He classifies them according to the relative position of the tang. His six types are thus named: (1) the base corner-tang; (2) the diagonal corner-tang; (3) the back corner-tang; (4) the mid-back tang; (5) bifurcated and two-tang pieces; and (6) the re-worked pieces, which usually take the form of drills. The second type could be better designated as an oblique corner-tang. The first five types are obviously knives; those with a sharp forward point would function as excellent skinning-knives; some with more rounded base-line and of type 4 or mid-back tang, could also be used as scrapers. His group No. 6 comprises pieces re-worked into sharp points, very serviceable as borers, whereas the blunt ones were likely re-used as scrapers. All the types are well illustrated by photographs of actual specimens arranged in eleven plates. Patterson suggests the possible methods of hafting his five types of knives. He also worked out the relative frequency of the various types found in Texas. It is interesting to note that 50 per cent. of the specimens belong to type 2 or 'diagonal corner-tang,' 30·2 per cent. to type 3 of 'back corner-tang,' and 15·6 per cent. to type 1 or 'base corner-tang,' the others being very weak.

The author suggests that the five types successively developed in that order from the 'common spearhead type of knife'—that is to say, the long biface blade with tang or short stem at the base, both edges symmetrical and convex. One edge, which we may call the upper or dorsal edge, became straight or nearly so, while the lower or ventral edge remained convex. This is my own description, based on Patterson's illustrations, as well as the following explana-

tion. The tang, at first straight or parallel to the narrow base-line of the knife, became more rounded, sometimes deeply notched, and progressively assumed an oblique position, ascending, so to speak, towards the upper corner of the base, and, finally, is obliquely placed on the corner of the base, as a knob. The basal edge is either convex or straight and the piece is subtriangular in shape, with a forward point more or less sharp; the opposite heel, below the tang, is square, roundish, or (more rarely) pointed. Then, the tang is completely off the base-line and placed on the back edge, at or near the corner. A further advance along the back-line locates the tang on or near the middle part of the back-edge. This leads in some cases to an almost symmetrical shape, either ovoid or subtriangular, according to whether the forward point remains sharp and the opposite corner of the former base of the knife affects a similar form, or both ends are rounded, often one more than the other. The bifurcated tang type (as fig. 5 above), when of the mid-back variety, coincides in shape with the neolithic Japanese stone blade represented in MAN, 1941, 3, fig. 5, already mentioned.

In September, 1937, Professor Patterson published *Supplementary Notes on the Corner-Tang Artifact*.[6] This paper briefly reports from various sources corner-tang artifacts found in several western states. They are: New Mexico, 11; Colorado, 12, which is incomplete, to my knowledge; Wyoming, 33; Montana, 2; South Dakota, 2; Nebraska, 18; Kansas, 15; Oklahoma, 7; Iowa, 4; Missouri, 9; Arkansas, 2; Illinois, 1; and Mississippi, 1; and the number for Texas is brought up to 608. This distribution of 725 'corner-tang' pieces, as they are called by the author, shows that these artifacts are most common over the Western Plains, and especially in Texas; which seems to result from the general movement of the Indian tribes from north to south in historical times. An important remark is the following: "All six types "described for Texas are well represented over "the entire distributional area."[6] (p. 37). It seems that the designation 'corner-tang' artifacts, employed by Patterson, is too specialized to cover the whole series properly, since some knives have the tang on the base-line and others on the dorsal edge, and they obviously belong to the same general class, 'corner-tang' being only one variety of the group. 'Stemmed' or 'tanged' artifacts would cover them all without specification of the location of the tang, which is the reason for the classification into five types within the class.

Finally, in July, 1938, Hans E. Fischel, of Berkeley, California, wrote a note on the same subject in *American Antiquity*[7] (pp. 152–154). From a perusal of the archaeological literature, he collected a supplementary number of tanged knives, increasing the figures above for some states and adding to the list: Kansas, 6; Wisconsin, 8; Louisiana, 6; Pennsylvania, 6. Thus the area of distribution is extended north, south-east, and east. Further study will complete what we already know on this subject; but it is interesting to note that, so far, not a single specimen of tanged knife has been reported as coming from the country west of the Rocky Mountains.

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NOTE.—A more complete bibliography is furnished by Patterson and Fischel with their respective articles.

ROYAL ANTHROPOLOGICAL INSTITUTE: PROCEEDINGS

House-keeping among Malay Peasant Women

33 *Summary of a Communication by Rosemary Firth, M.A., 16 December*, 1941.

Although much is talked of the improvement of native standards of living, few scientific studies of native standards in real as apart from monetary terms exist. Yet it is imperative if we are to alter or improve the native standard that we should first have an empirical picture, not only of the income enjoyed but how that income is expended. A very

false picture of the kind of food eaten, and the general pattern of living, can be drawn by consideration alone of what any people could do in theory with a given money income. The way that this money income is actually spent vitally affects its real value, and it may be spent in very different ways in different communities, according to the social background, religious traditions, ceremonial obligations, and habits of taste of the people.

A study of household economy of fishermen's families on the north-east coast of Malaya was made over periods ranging from one to five months. The daily expenditure of every cent was recorded, the amount of food bought, eaten, received, or given away, the amount of savings, and the types and extent of unusual ceremonial expenditure on feasts, as well as the outstanding obligations in money and kind to neighbours and kinsfolk.

The resulting picture of family life shows a small household of three or four persons as the predominant basic economic unit, one or more such units sometimes sharing house-room. The weekly expenditure, analysed in detail, gives an average of from one to one-and-a-half dollars for food, light, and ordinary routine expenses. This sum, which is usually drawn weekly by the husband as if he were a wage-earner, though in fact he shares in a complicated system of co-operative enterprise, is spent by the wife, who in spite of her theoretical position in Islam, usually exercises a dominant influence in the family. Roughly half this sum is spent on the staple, rice (usually polished), which occupies an important place not only in the physical, but also in the social life of the people. Of the rest, as much as a third is spent on extras in the way of snacks, coffee and tobacco, and betel for chewing, things which cannot be called necessities of life by ordinary standards. The expenditure on fresh fruit and vegetables, which from a dietetic point of view might be much larger, is consequently small. A good deal of free fish is received weekly by the fishermen in the good season, which supplements income to the extent of a few cents weekly.

Some of this money is spent in small, local grocers' shops, run by either Malays, Chinese, or Indians, some in the local markets and on the beaches, some of it on imported and European-type goods in the bigger towns, where many of the amenities of modern civilization such as shoes, torches, and bicycles may be had.

Considerable sums of money are saved regularly by every fisherman's family for the monsoon months when earnings practically cease, as well as for the purchase of equipment, as boats and nets. Much savings are invested in gold jewellery and ornaments. Although routine expenditure is on a low level, there are certain grand occasions when large sums of money, amounting to over a hundred dollars, may be spent, and this is made possible by a traditional system of loan and counter-loan; which is in effect a mobilization of assets over half a lifetime. In spite of these occasions, or because of the way in which they are organized, we find no indebtedness on a serious scale to Chinese or Indian moneylenders. Interest rates for capital equipment, though high, are not exorbitant, considering the risks; interest is not charged on loans for ceremonial purposes.

To the Malay personally, his expenditure on what we should call 'extras,' not strictly necessities of life, is important. Comparison with other household economies shows that in every society, including our own, a better theoretical distribution of expenditure is possible, but that in practice there is no ideal of housekeeping. Different conceptions are not haphazard, accidental, due to laziness, stupidity, or avarice, but are deeply rooted in the people's whole valuation of their time, labour, social obligations, religious traditions, and pattern of behaviour. Although the Malay fisherman's standards are not unsatisfactory, if we wish still to improve them we must understand the why and wherefore of his present standards; for we shall not find his food habits any easier to alter than we have found those of the people of England under stress of war.

The full results of this survey are shortly to be published as London School of Economics *Monograph on Social Anthropology, No. 7.*

PROCEEDINGS OF SOCIETIES AND INSTITUTIONS

The Turkish Halk-Evi in London.

34 Nothing illustrates better the profound revolution in national life which has occurred among the Turkish people during the last twenty years than the type of institution known in Turkish as a *Halk-Evi* or 'People's House,' of which there are now about four hundred, some in cities and towns, others in quite small villages; and their number is being steadily augmented.

A *Halk-Evi* may be briefly described as a centre of learning, and a hive of activities, at which the members meet to pursue studies in one or more of the nine recognized branches, to take part in some form of recreation, or to organize certain outside activities, such as social work amongst villagers, sick folk, or children.

The full number of branches in a People's House in Turkey is nine, namely: Sport, Languages, Adult Education, Library, Social Help (Medical Section), Village Work, Art, Drama and Music, Museum and History. The People's House, therefore, combines the functions of a Village Institute, Athletic Club, Literary and Philosophical Society, Mother's Union, Glee Club, and University Extension Centre. Its object is to interest the people at large in all aspects of their own life and affairs, and to create an intelligent and mutually helpful body of citizens. While it retains the fundamental characteristics of Moslem society, its freedom from class distinctions, and its tradition of good will and good works among Moslems, it aims at the most modern and rational outlook on the world of nature and of

man, and the application of scientific knowledge to social as well as to economic questions.

On 19 February, 1942, a Turkish *Halk-Evi* was opened by Dr. Rüstü Aras, then Turkish Ambassador to Great Britain, at 14, Fitzhardinge Street, London, W.1, in the presence of Mr. Eden and other members of the British and Dominion Governments, prominent members of the Turkish community in this country, and many English friends of Turkey. The house has been established by the joint co-operation of the Turkish Embassy and the British Council, and, as Mr. Eden explained in his speech, is the first *Halk-Evi* to be opened outside Turkey, thus forming a fresh and significant link between the two countries.

In London it is obvious that the full programme of a Turkish *Halk-Evi* cannot be realized. The Turkish community in England is very small and scattered, and while the 'People's House' will serve as a Turkish Club and Social Centre, its primary purpose is to give a picture not only of a normal *Halk-Evi*, but also of modern Turkey to English people. It is proposed, therefore, to devote six sections to the following branches: (1) Education, Sport, and Youth; (2) Village Life and Agriculture; (3) Archæology; (4) Literature and Fine Arts; (5) Health and Social Services; (6) Economy; and to display the activities of Turkey in each field by means of photographs, graphs, statistics, literature, and so forth. There will also always be a member of the staff of the House to give verbal explanations. The *Halk-Evi* will possess a library and reading room, which, it is hoped, will become an authoritative centre of reference for all Turkish and Anglo-Turkish studies. Later it is intended to arrange courses of lectures on aspects of Turkish life, a class in the Turkish language, exhibitions of Turkish art, and occasional concerts of Turkish music.

The first exhibition, which was inaugurated on 19 February and will remain open until the middle of April, includes a small display of Turkish archæology, arranged by the Institute of Archæology, London University, with the purpose of illustrating some of the important work achieved by the Turkish Historical Society during the past few years, and also certain of the results of foreign expeditions. The exhibition consists mainly of photographs depicting the archæological sequence from prehistoric to Roman times. The following sites are represented: Mersin (with a small collection of sherds), Alaça, Kusura, Troy, Boğaz Köy, Yazili Kaya, Atchana-in-the-Hatay, Carchemish, Pazarli, Lüle Burgaz in Thrace, as well as Hellenistic sites. A notable feature is the series of coloured reproductions and photographs, hitherto unpublished, which have been especially lent by the Walker Trust, St. Andrews University, to illustrate the Byzantine mosaics and pottery discovered in Istanbul shortly before the war.

All communications and inquiries about the *Halk-Evi* and its work should be addressed to the Secretary, M. Faruk Akçer, 14, Fitzhardinge Street, W.1.

OBITUARY

Miss K. M. Martindell.

35 By the death of its Assistant Secretary, Miss K. M. Martindell, on 30 January, 1942, the Institute has sustained a loss which it can ill afford. She was appointed to her post soon after the beginning of the last Great War, and with little tuition began to adapt herself to our office methods, and to build up a knowledge of the Institute's affairs and of its Fellows, which eventually became unequalled. The post was not an easy one for a newcomer, the liability to constant interruption and to incessant demands upon patience and resource being detrimental to continuity of thought and action; but Miss Martindell was rarely at a loss, even when, as was the case at many times, she was Librarian as well as Assistant Secretary. I had more opportunities than had most Fellows of appreciating her willing aid to the honorary officers in their work, and of taking advantage of it, since for practically the whole of the time she was with us I was a Member of Council and of most committees, and at intervals an officer. Throughout this period of official association our relations were always friendly and frictionless, and I had a high respect for her character.

During the two removals which the Institute has suffered since the last war, a large share of the burden of disorganization and reorganization fell upon the Assistant Secretary, and the work was strenuous and exacting. In the last war, those of us who carried on the work of the Institute experienced our troubles and trials, but these were slight compared with those of recent days. Miss Martindell, in particular, has worked under adverse conditions of temperature, light, and ventilation, whilst a shortage of staff has emphasized the difficulties and confusion arising out of the transfer of a large part of the Library to safer areas. Daily travel to and from her home, at some distance from London, was a further handicap to her, and we must admire the courage and endurance with which she stuck to her post until, about the middle of December last, her health finally broke down.

Miss Martindell's strong sense of loyalty led her to identify herself with her office to an unusual degree, and there was no surer way to strain her forbearance than to attempt to override the rules and regulations of the Institute. Her duties, also, were her privileges, and she disliked to be deprived of any of them. She will be greatly missed, and our sympathy must go to her relatives, whilst our own loss is not only official, but in many cases personal. The Institute will be fortunate if it can secure a successor equally zealous in its interests, and equally capable of tempering duty with devotion.

H. S. HARRISON.

There is little that I can add to the appreciation of Miss Martindill by Dr. Harrison, save that in her I have lost the faithful friend of many years. She was loyalty itself. Her devotion to the interests of the Institute was such that in her last pathetic letter to me she made no mention of her own sufferings but lamented only that she was unable to carry on her work. "I little thought," she wrote, "that I should have to leave the Institute "so abruptly," and went on to regret the trouble and difficulties that her absence must be causing. But I gathered from that letter that she would never return.

I could wish that her name be recorded among those of the benefactors of the Institute, for she gave it of her best and died at her post.

M. E. DURHAM.

REVIEWS

The Mab's Cross Legend. *By Rev. T. C. Porteous. Trans. Lancashire and Cheshire Antiquarian Society, LV* (1940). 1–40 *pp.*

36 The 'Mab's Cross Legend' is connected with the remains of an ancient cross still standing in the garden of the Wigan Girls' High School, where it was placed for safe keeping when removed from its older site on a highway 78 feet distant. The legend has been discussed, and its actuality doubted by students of Lancashire tradition. The President of the Lancashire and Cheshire Antiquarian Society now undertakes a searching examination of the historical basis of it, and establishes it in a framework of verifiable fact.

The two chief persons concerned, Sir William Bradshaigh and his wife Mabel, are mentioned in documents of irreproachable standing; Sir William is known to have taken part in local feuds and rebellion of the time of Edward II; he was indeed separated from his wife for some years and while in hiding or banishment was believed to have died. He returned to his wife and his estates and lived out his days in peace under the king's pardon. Of Dame Mabel's marriage during her husband's absence no proof is forthcoming, there is only the legend to tell of this and of her penitential visits to the cross, and although those events are recorded on the Bradshaigh Roll, and in a written declaration of date 1564, they cannot be accepted as fact, while left unmentioned in records which speak of legal proceedings in which she took part and of her benefactions. The inference remains that a legend of wide popularity has been attached by popular fancy to the life-story of persons prominent in local history. This, rather than the framework of fact, will interest anthropologists and appeal to students of psychology. It is a good illustration of the habit man has of recovering incidents stored in popular memory, to restore them in a modern setting.

The legend of Mab's Cross is a version of the theme of King Horn and Rymenhild. Mr. Porteous refers to many variants of it, and in his note on the ballad Child quotes others, some mere echoes of this or that feature, others told with splendour of detail, as in the tale of Messer Torello by Boccaccio. Scott had thought the theme inspiring, and ballad versions exist in most of the languages of Northern Europe. Schofield places the home of Rymenhild in the Wirral, not far from Wigan, whither the legend may have been carried by Norse settlers. We may be allowed to think of it as living on from that early date in this region, especially when we find another version of it in Cheshire, connected with a monument in the parish church of Mottram-in-Longendale and with the remains of a cross known as Roe (Ralph) Cross. The legend is affixed also to persons in Yorkshire, and, according to Mr. W. E. A. Axon, is known in Devonshire as part of the story of Sir Francis Drake.

Another illustration of this persistent reappearance of traditum may not be out of place here. The first stone house in Brisbane (Queensland) was built by an English settler who employed men in experimenting with the acclimatization of different kinds of grain; later he sold the house and moved to the 'Bush.' On leaving he was said to have left the wages for his men, in gold and silver coins, with a foreman. Before the date of payment came a raid was made on the district by natives or unruly settlers, when the foreman hid his 'pot of gold' in a hole in the ground and tried to make his escape across the river, swimming. He was drowned and no one knew where the 'treasure' had been buried. The owner of the house was known to me and there was not a word of truth in the story of the hidden 'treasure'; but the story lived on till a recent purchaser of the estate employed a dowser, and other persons, to search for the 'pot of gold.' The house of note, mentioned in all histories of the town, had caused the resurgence of a tradition found haunting mansions in distant parts of the inhabited world, and alive in the memory of men making a new home overseas.

MARY M. BANKS.

A Bibliography of Human Morphology. 1914-1939. *By Wilton M. Krogman. University of Chicago Press (Cambridge University Press)*, 1941. 383 *pp. Price* 18*s. net.*

37 The title of this volume may suggest anatomy rather than physical anthropology to the British student, but in fact it is concerned with the latter subject. The year 1914 was chosen as the beginning of the period covered because of the appearance of the first edition of Rudolf Martin's *Lehrbuch* in that year. The bibliography in it was extended in the second edition (1928), to form the third volume, and until the appearance of the work reviewed there was no other comprehensive bibliography of the subject. A certain number of references are given to more or less classical works issued before 1914, and it is said that the non-German literature prior to 1928 is covered more fully than in Martin's volume. The 11,000 odd references are given in sixteen subject divisions, and it may be doubted whether the list for any one of these includes all the papers and books worth recording. In the quarter of a century ending in the fateful month, September, 1939, when Dr. Krogman ended the collection of his material, there was an enormous output of research dealing with man's physical characters. It was a period in which descriptive records accumulated rapidly, and at the same time there was extensive discussion of methods and modes of interpretation. No general agreement was reached regarding several essential questions. When conditions permit resumption of research in pure science many anthropologists will turn with gratitude to *A Bibliography of Human Morphology.*

G. M. M.

The Master Aryans of Nuremberg. *By J. W. V. Gerter. Printed by W. Heffer, Cambridge*, 1941. 30 *pp. with* 18 *plates. Price* 1*s.*

38 The introduction to this pamphlet is a rough-and-tumble reply to the more extravagant expressions of the racial doctrine promulgated in pre-war Germany. It is not difficult to ridicule the anthropology of the leaders of the Nazi party, and the writer does this in an effective and amusing way without reference to arguments of scientific value. In the second part he considers Streicher's assertion that a true German must "(1) have "German parents, (2) must be born in Germany, "(3) must not have a Jewish name, (4) must marry a "German, (5) must not have Jewish friends, (6) must "want to end his days in Germany, and (7) must be "born and die in Germany." This queer medley of tests is applied to 201 men listed as being Germany's most famous Aryans. It is concluded that 109 of them were included in the list erroneously, as they fail to satisfy the tests. G. M. M.

CORRESPONDENCE

A Poacher's Rattle from Lincolnshire.

39 SIR,—The sketch (fig. 1) shows a poacher's rattle of very peculiar design, which was used in north Lincolnshire about a hundred and fifty years ago for attracting partridges. It is apparently constructed from a piece of mahogany chair-leg, to which a strip of box-wood has been screwed. This strip, left unattached at the end nearest to the wheel, presses upon the teeth of the latter and when the wheel is revolved by being

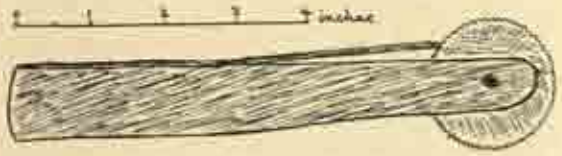

FIG. 1.—A POACHER'S RATTLE FROM LINCOLNSHIRE.

smartly drawn over the surface of corduroy trousers the resultant noise is sufficiently like the call of a partridge for the birds to answer it, as I have verified by experiment.

The rattle, which is peppered with shot-marks, came from the collection of the late Edward Peacock, F.S.A., of Bottesford Manor, and was probably used in that stretch of country 'between Trent and Ancholme' of which the "Lincolnshire Poacher" was one of the most familiar features until very recent times.

PETER B. G. BINNALL.

The Earliest known Inhabitant of Central Asia. *Cf.* MAN, 1942, 24.

40 SIR,—In the discussion following Professor Minns' paper on *Archæology in the U.S.S.R.*, read at the Royal Anthropological Institute on 20 January (MAN, 1942, 24), Mr. Burkitt referred to the recent discovery of a palæolithic skeleton in the region of Tashkent. On returning home the same evening I found that the post had brought me a report on the excavations, for which I am indebted to Dr. Debetz of the Anthropological Institute, Moscow State University. It is stated that the discovery furnishes the first indisputable evidence of palæolithic man in Central Asia, and also the first evidence of Mousterian culture for that region and large territories contiguous to it. This is also the first discovery in the U.S.S.R. of a well-preserved skull of Neanderthal type. Since the small volume referred to is not likely to be readily accessible to anthropologists outside Russia, I hope you will be able to print the following summary of it. I shall be pleased to lend the report to any student in this country who requires further details.

The title-page is in Russian only, kindly translated by a colleague as:

Proceedings of the Uzbek Republic Branch of the Academy of Sciences of the U.S.S.R. Series 1. *History and Archæology*. Part 1. 'Investigations of the Palæolithic Cave of Teshik-Tash.' (Tashkent, 1940.)

The Russian text is in three parts, each followed by a short summary in French, viz.: A. P. Okladnikoff, 'Les recherches de la grotte paléolithique Teshik-Tash' (pp. 3–45); G. R. Debetz, 'Sur les particularités anthropologiques de la squelette humaine obtenue à la grotte Teshik-Tash' (pp. 46–71); Vera Gromova, 'Les restes des mammifères de la grotte Teshik-Tash' (pp. 72–76). The whole report is said to be a preliminary one. I am told that the name of the cave should be pronounced 'Teshique-tâche,' the second part being as 'tâche' in French.

The cave is situated in the valley of a tributary of the Oxus, at a distance of 18–20 km. to the north-east of Bai-sun, in the Uzbek Republic. Caves and shelters abound in the numerous defiles cut in the Jurassic limestone of the neighbourhood. The Teshik-Tash cave covers an area of 21 × 20 m., and its height at the entrance is 7 m. Digging revealed five cultural layers in which stones and pebbles were found in abundance, separated by sterile layers in which no stones were found. Large numbers of animal bones were scattered round the hearths, 98 per cent. being of goats (*Ovgen sibirica*), which had evidently been one of the main items in the diet of the inhabitants. The faunal list also includes leopard (*Felis pardus*), boar (*Sus scrofa ferus*), horse (*Equus caballus*), marmot (*Marmotta* sp. ?), and hare (*Ochotona* sp. ?). All the species identified are widely distributed in Central Asia to-day with the exception of the wild horse.

The artifacts consist of nuclei and implements made principally from calcareous rock and flint, but there are some made from green jasper, quartzite, quartz, and silica. The flake tools—including some re-touched on one or both edges, which had served as knives—*coups de poing*, 'pointes' and scrapers are said to be of typical Mousterian forms. This is true for the implements in all five layers. There are cuts on some of the animal bones, and some of the broken shafts of long bones had been pointed.

The incomplete human skeleton was found immediately below the uppermost cultural layer. The bones were together, but in disorder. There had evidently been a burial, disturbed by a small rodent, though the skull was not damaged in this way. Horns of goats had been arranged in pairs round the body. This evidence of a 'ceremonial' burial is a matter of particular interest.

It was possible to make a reliable reconstruction of the complete skull from the 150 pieces into which it had been broken, though some fragments are missing. Other parts of the skeleton recovered are the incomplete right side of the pelvis, the incomplete left tibia, the shafts of both fibulæ and the left humerus, both clavicles, and the atlas. These remains are of a child of about 9 years and, it is surmised, of male sex. In view of its stage of

development, the skull is remarkable for its large size, the capacity being 1,490 c.c. An endocranial cast shows that the pattern of the cerebral arteries indicates a condition intermediate between those of *Sinanthropus*, on the one hand, and modern man on the other, as Weidenreich found for the other Mousterian skulls. The Teshik-Tash specimen exhibits all the characteristics of the European Neanderthaloid group, especially the following features: (1) large and massive cranium, (2) low cranial vault, (3) retreating frontal bone, (4) protruding occiput, "comme si aplatie dans la direction verticale," (5) superciliary ridges in the form of a *torus supraorbitalis*, (6) flattened maxillæ without canine fossæ, (7) absence of chin, (8) large teeth.

The excavations were carried out in 1938 and all concerned are to be congratulated on having prepared the preliminary report with so little delay. Numerous line drawings and photographs are reproduced in it. It is to be hoped that a final report will give the latter on better paper, and that photographs of the reconstructed skull will be added. Mr. Burkitt informs me that there are two articles on the cave in the issues of the American publication *Asia* for July and August, 1940, and that the second of these gives photographs of the reconstructed skull. They are not to be found in the illustrated note given in *Antiquity*, Vol. 15 (1941), p. 194.

G. M. MORANT.

A Little-known Raft from the Central Provinces, India. *Illustrated.*

41 In the course of a zoological tour in the south-eastern part of the Central Provinces, I observed the simple but curious raft which forms the subject of the present note, which is published with the permission of the Director, Zoological Survey of India. The raft was found in use in a large *jheel* (tank) not far from Nagri (or Nangri) on the Raipur Forest Tramway,

Fig. 1.

and within three miles of Sihawa village—the place of origin of the Mahanadi River—at the southern extremity of Dhamtari Tahsil of Raipur District.

The raft (fig. 1) is made of 6 or 8 earthenware pots 14 to 16 inches in diameter in two rows fastened together by their necks to small lengths of split bamboo about 4 feet long with green strips of bamboo as binding rope. There are 3 or 4 of the split bamboos between the two rows of pots and one each on the outer side. There are 6–8 pairs of split bamboos 3 feet long fastened across, one pair each at the ends, and 2 or 3 pairs, according as 6 or 8 pots are used for making the raft, between two consecutive rows. This framework of split bamboos ensures that the pots are firmly held together in position. The pots have their mouths open, although one or two may have loose saucer-like lids covering them. The lids are probably intended to prevent live fish thrown into them from escaping. The entire raft, which is

Fig. 2.

4 to 5 feet long and 3 feet broad, is big enough to carry an adult person squatting on it with his feet fully stretched. The raft is so light that when a person sitting on it leans over to one side the basal part of the pots of one row of the opposite side is lifted up almost to the level of the surface of water (fig. 2), looking as though the raft will topple over. But the raft appears to be practically unsinkable like an outrigger canoe. Except when the pots are filled with water from rains, or through leaks in them, sinking of the raft would seem to be impossible. The raft is propelled by a broad strip of bamboo used as an oar which serves also as a rudder.

The tank is full of weeds of all kinds, including species of *Potamogeton*, *Elodea*, *Nelumbium*, and *Trapa*, and the village people of Nagri use the raft described above for collecting the spinous fruits of *Trapa* from the deeper parts of the tank, and for fishing by a series of lines hung up from a horizontal string tied to vertical wooden poles fixed in the mud at the bottom of the tank at intervals of 4 to 6 feet. The fishing lines are 12–18 inches long and hung at intervals of 2–3 feet apart with a small, fresh frog stuck on to each hook as a bait. The lines are left in the tank from the early part of the day till the evening when the fishermen paddle along on their raft to collect what fish may have taken the bait in the course of the day. In fig. 2 the fisherman may be seen removing the poles and the fishing lines, which are dried for use again on the following morning.

The raft is simple in construction, cheap, and efficient in weed-ridden tanks, where keeled boats would be of little use. It may perhaps be used with greater safety than the *tigari* of Bengal on large and swift rivers, and seems to be infinitely cheaper than coracles made of reeds, bamboo, and hide.

B. SRINIVASA RAO.

LUNAR CRESCENTS AS AMULETS IN SPAIN

MAN

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ORIGINAL ARTICLES

LUNAR CRESCENTS AS AMULETS IN SPAIN. *By W. L. Hildburgh, Ph.D., D.Litt., F.S.A. With Plate D.*

42 Crescent-forms have long and among many various peoples, been believed to be beneficial, in one way or another, to persons or to objects with whom or with which they have been brought into association.[1] As bases for the beliefs for the virtues of such forms there are not alone the obvious ones of a crescent as a representation of or a symbol for the moon itself, or of some divinity closely associated with the moon, but also the resemblances between a crescent and a pair of horns [2]—horns singly or paired have long been regarded as preservative from occult evils—or a pair of teeth or of claws set with their thicker ends close to each other.[3] In Spain, where crescents appear in various ways as amuletic protections, it would seem that they have been used largely as representations of the moon. But it would seem, also, that several various conceptions, originally quite independent of each other, are involved, though by now they have become so inextricably interrelated as to render evaluation of their former relative importances practically futile. As to in what degree the amuletic crescents have been looked upon as representative of the moon itself, and in what degree as representative of some divinity associated with that luminary, I think we must accept as now too confused for satisfactory resolution.

Lunar crescents, as amulets, have in Spain two major intentions: they may be worn as preservative from the effects of 'evil eye' (*mal de ojo, aojo*), 'fascination,' and the like, as caused by persons; or as similarly preservative from a kind of lunar influence which, in the popular mind, seems to be closely associated with *mal de ojo*. What may have been the beliefs, in prehistoric Spain, concerning the occult virtues of crescentic forms, I do not know; but lunar divinities from the Semitic East and from Ancient Greece and Rome must in turn have affected popular notions, and the mediæval invaders brought with them from Northern Africa beliefs in the protective powers of crescent-shaped designs. From the now presumably inextricably tangled result of such admixtures, it would appear hopeless to try to draw any positive conclusions concerning the ultimate origins of the Spanish attributions of amuletic virtues to crescent-images.

In Spain the crescent may be employed singly, either as an independent object or as the basic element of a compound amulet; or it may be used as a subsidiary element of a compound amulet whose basic element is some other supposedly protective device. It may appear as a simple geometrical form, or personified through the lining of its inner curve with a human face in profile; it may, according to some persons, symbolize a pair of horns (and consequently perhaps itself be symbolized by a gesture in which the index and the little finger are extended from a hand otherwise closed) or, seemingly—if we are entitled to use as criteria certain Spanish pendants—it may sometimes be based upon a pair of boar's tusks, or of other analogous natural objects, mounted together so as to form a crescent.

Amulets based on the Crescent.—Of simple, unadorned crescent-forms as amulets in Spain, I recall no examples: Spanish amulets wherein a crescent appears seem always to contain some other element or elements, wherewith the crescent is more or less customarily associated, intended to indicate that the figure is not merely a geometrical shape without other than a purely decorative significance. The

simplest form in which the amuletic crescent seems to occur in Spain [4] is that including a profile of a human face indicating that the amulet symbolizes the crescent moon. Lunar crescents of this kind seem—for what reason I am not aware—to have been comparatively rare in at least those parts of Spain where I have collected material. I have in my collection one, for wear by a horse, of bronze with a projecting loop (to take a strap) at the back, which I obtained at Granada in 1905 [5]: it is closely similar to others noted in that year at Seville and at Madrid, but even then seemingly almost obsolete in Spain. It is analogously similar to bronze horse-amulets, both ancient and contemporary, from Italy,[6] and fairly recent from France.[7] The form in Spain would seem probably to have been introduced with the Roman civilization; besides the amulet of Bellucci's fig. 31, he illustrates elsewhere a somewhat similar bronze anthropomorphized crescent from whose visage hangs a star-form—so making a combination analogous to that of some Spanish crescent-amulets—found with Etruscan-Roman objects of about the third or second century B.C.[8]

But of simple anthropomorphized crescents intended for wear by persons I have—curiously, in view of their quite common employment in Portugal [9]—myself met with no actual Spanish examples, although I have a record (*c.f. infra*, 'Crescents against Effects of the Moon') of a form in use at Badajoz and (as it would appear from the record) elsewhere in Badajoz Province.[10] The closest Spanish example within my personal experience is the one (bought at Madrid) reproduced in Pl. D, 1; it is of silver, in openwork, in low-relief on the front and entirely smooth on the back, and differs essentially from the bronze horse-amulets cited above in that the face occupies only a comparatively small part of the object—one might well regard it as substantially a crescent-form modified by the insertion of the face—and in that a device which seems to have had some amuletic significance appears within the body of the crescent. This device, which we shall meet repeatedly in slightly variant forms in association with Spanish amuletic crescents, in the present case is a sort of equal-armed cross composed of rays; it is here accompanied by two small five-petalled flowers and some meaningless scroll-work. While it is perhaps possible that these small flowers have some amuletic connotations, as have similar flowers in the Neapolitan compound amulets known as *cimarute*,[11] I am inclined to think that, since, unlike the small cruciform device, they do not appear to be a regular feature of the Spanish crescents, they serve no purpose here other than decorative. A silver-gilt pendant, obtained at Seville, of almost identical shape, but slightly larger and with the rayed device showing more clearly as a cross, has its rim prolonged, beyond the extremities of the subsidiary lunar-crescent, so that it forms a closed ring.[12]

In an amulet (Pl. D, 2) obtained at Seville, similarly of silver and plain on the back, the human-faced crescent of fig. 1 is replaced by a crude representation of a hand making the 'fig' gesture (*i.e.* with its fingers closed and its thumb protruding between the index and the middle finger), and the cross-like device formed of rays is replaced by a sort of equal-armed cross enclosed in a quadrilobe. The 'fig' gesture, whether executed by an action or symbolized by an image, has been accepted as preservative since long before the Christian Era. Amulets representing it have been found among Egyptian objects assigned to the Eighteenth Dynasty, and in the Balearic Islands in a Carthaginian necropolis of the fourth or the third century B.C., as well as quite commonly in places where the Romans settled or colonized: and they are still regularly used in the Peninsula as preservative against *mal de ojo, fascinación*, etc. In Portugal and in Italy, with civilizations based on the Ancient Roman, pendants in the form of fig-hands are in general use. To consider in any sort of detail the subject of such hands as amulets in Spain would take us far afield; suffice it to say that, just as in other parts of the Mediterranean area, the fig-hand seems in Spain generally, if perhaps not invariably, to have been a symbol of the vulva [13] and to have essentially feminine implications. Because of those implications it would appear to have been, although a purely pagan device, in some way associated with the protective powers of the Virgin Mother, just as has been (at least in recent centuries) the lunar crescent upon which she is often shown standing.

The four-petalled device within the body of the crescent of Pl. D, 2 would seem to be related in some way to amuletic images of the hand. It frequently appears associated with the amuletic

open-hands (of the type called by Christians, but seemingly not by Moslems, 'The Hand of Fatima') formerly employed in Moslem Spain as they are still today in other Moslem countries, as well as associated with Spanish fig-hand amulets. What that device signifies, I do not know. Perhaps it may be in Spain a survival from a Spanish Moslem symbol (as it is still a Moslem symbol) for the supposedly preservative number *five*, which itself symbolizes the protective hand.[14] Or, possibly, it may be related to the solar (or stellar) symbol which we find associated with a number of other Spanish crescentic amulets—perhaps it is not by mere chance that it does not occur in any of the crescents (described *infra*) in which solar emblems appear—for we know that some cruciform device has often been recorded as a symbol of the sun. Despite its resemblance to a Christian cross, I have never heard Spaniards assign protective virtues to it because of that resemblance. I am inclined to think that in Spain it has, or has had, some meaning associating it with the Virgin Mary; thus, in the crescent of Pl. D, 6, its usual place is occupied by a monogram representing 'Maria,' while we may see it used as a decoration for her robe in certain Spanish religious pendants of the sixteenth century. One may, perhaps, perceive the possibility of such an association in connexion with her customary depiction in the form of 'Our Lady of the Immaculate Conception,' in so far as that depiction has been inspired by *Revelation* xii. 1, '. . . a woman clothed with the sun . . .' (*cf.* p. 77, *infra*).

The amulet of Pl. D, 3, although less carefully made, is similar in design to that of fig. 2, and it has, set upon and co-centric with the four-petalled emblem, the pointed tip of a crystal of amethystine quartz. While I am not inclined to think that this bit of stone was supposed to exert, unless possibly due to its pointed form, any occult effect, it is perhaps worth recalling that Pliny records[15] among the falsehoods of the 'magicians' that 'if we inscribe the names of 'the sun and moon upon this [amethyst] stone, 'and wear it suspended from the neck, with some 'hair of the cynocephalus and feathers of the 'swallow, it will act as a preservative against 'noxious spells'—a statement which conceivably might have had some bearing on the present association of amethyst with a moon-shaped amulet against evil eye and witchcraft, and that the more so if the four-petalled emblem has indeed a solar connotation.

A bronze pendant (Pl. D, 4) from Granada follows pretty closely the same seemingly standardized design, but is cast in one piece with a solid back to its openwork. Its principal interest for us lies in its conventionalization of the fig-hand to such an extent that, were we lacking knowledge of its derivation, the projection would be unrecognizable.

In the amulet of Pl. D, 5, an unused example of this 'standardized' type, newly cast in brass and sold (in 1911) at Seville, in the place where we have had a fig-hand we now have no more than a small ring—possibly merely a conventional replacement of the fig-hand of the other amulets of its type, but possibly to be related rather to the rings or disks in the objects shown in Pl. D, 7, 9, and 10.

An openwork silver crescent (Pl. D, 6) containing an M and an A intertwined and surmounted by a crown—a cipher representing 'Maria'—has a fig-hand projecting from its inner curve. Bought in Madrid, in 1919, this amulet seems to have had but little wear. It is peculiarly interesting in that the four-petalled emblem, commonly found in some of the older amulets of its type, and perhaps originally essentially associable with Moslem, rather than with Christian, symbolism, has been replaced by something which unquestionably represents the Virgin Mary.

The amulet shown in Pl. D, 7, obtained at Seville, consists of a piece of brass, so fresh that it still retains marks of the file on both faces, with a projection—recalling the fig-hands of other amulets—from the centre of its inner curve. The projection has been impressed (seemingly by a punch) on one side with a disk displaying human features. What the disk represents, I do not know, unless it be the sun (*cf.* Pl. D, 8, 9); were the moon intended, the face presumably would have been in profile.

The crescent of Pl. D, 8, from Madrid, is very unusual. Cut from a piece of stiff brass sheet, it has at the centre of its inner curve a projection which I think we may take to be a highly-conventionalized fig-hand of the type appearing in Pl. D, 2, 3, 4, and 6, and at either extremity a small rayed object stamped on both faces with a small circle, the remainder of the inner curve being cut into forms which I assume to be merely decorative.

It is perhaps worth recalling here a Carthaginian relief in which are present, in a horizontal line, a downward-pointing lunar crescent set above a small disk, an open-hand with outspread fingers, and a sixteen-rayed object.[16] The disk surmounted by the crescent quite probably in this case represents an eye with its eyebrow,[17] but it parallels curiously closely a combination we find in Spanish amuletic objects (*cf. infra*); the open-hand has been, as we have noted above, an alternative equivalent of the fig-hand; and the rayed object recalls the 'sun' of Pl. D, 9, which, oddly, and perhaps due to chance alone, if complete would similarly have sixteen rays. It would be unwise to suggest that a parallelism so close persisted through the numerous changes of peoples and of beliefs of more than twenty centuries,[18] even though we have before us, in the fig-hand, an actual instance of a form (albeit a simple one) in use by the Carthaginians as an amulet and still similarly in use in Spain today. On the other hand, that the parallelism is perhaps not entirely fortuitous and a result of 'convergence' is suggested by the Algerian and Tunisian designs cited in n. 24, *infra*.

The bronze amulet of Pl. D, 9, obtained at Seville, presumably was intended to be worn by a horse. Its general form gives the impression that it has been modelled to represent a pair of animal-defences—most probably a boar's tusks, but possibly claws of some feline beast or of a bird of prey—mounted end-to-end in a metal socket. From the centre of the inner curve extends a rayed disk, whereon is a face, presumably representing the sun.

Pl. D, 10, shows another bronze amulet which looks as if modelled on one composed of a pair of claws or tusks; from the centre of its inner curve projects a small circular eyelet. This eyelet seems to show some slight signs of wear, such as could have been produced by an object pendent from it: the rest of the amulet shows evidences of very considerable use, and the eyelet at the top, whereby it hung, is almost completely worn through.

Boars' tusks have long been used in Spain, as they were used in Ancient Italy and are used in Italy to-day[19] as protective against evil eye and the like. Although in *Folk-lore*, xvii (1906), Pl. VI, 16, 17, 18, I have reproduced several contemporary examples from Spain,[20] all these (like the other Spanish ones I have since seen) are —as are Bellucci's Italian ones—mounted singly; I recall no Spanish amulet formed of two boar's tusks set end-to-end, although such amulets occur elsewhere,[21] and among peoples whose cultures have been greatly influenced by Arabic civilizations.

Associated with the crescents in the amulets of Pl. D, 7, 8, and 9 are devices which seem to represent a second heavenly body—presumably the sun, since in two of the pendants it is shown with human features full-face, but conceivably, because of its rays in two cases, a star. A similar combination, in use in Ancient Italy, has been referred to above (p. 74); Bellucci compares with this a contemporary Libyan gold pendant composed of a simple crescent from whose inner curve hangs a disk from which hangs, in turn, a conventionalized open-hand. As I have already pointed out (p. 74), it seems conceivable that in such appearances of a celestial body with a crescentic device we may have the origin, or at least a conducive or a strengthening factor, of the four-petalled emblem so often found associated with the Spanish amuletic crescents. The Mudéjar pottery fragment illustrated, through a small area of it, in Pl. D, 17, has as the principal component of its reiterated element an open-hand at the tip of whose little finger is a crescent with a tiny disk partly within its curve.[22] Again, one of the elaborate jet fig-hands (of the type illustrated in Pl. D, 12–16) in the collection of carved jet in the Instituto de Valencia de Don Juan has on its palmar side a human-faced crescent with a disk, whereon is an equal-armed cross, similarly partly within its curve.[23] We may, incidentally, observe that the wrist-portion of this fig-hand is in part composed of four small open-hands, a matter suggesting strongly that the crescent plus a disk or a stellar-form or a four-petalled emblem was part of a regular complex of some kind, presumably associated with the then Moslem culture[24] of Spain, in which the symbol seems, in at least some cases, to represent the sun.

If we turn again to the silver open-work pendant reproduced in Pl. D, 6, in which the more usual four-petalled emblem has been replaced by a monogram composed of an M and an A interlaced, we may observe that the form of that monogram suggests some sort of relationship between the monogram and the pair of interlaced triangles, forming a six-pointed star, often called the 'Shield

of David,' which perhaps has served in Spain as a symbol of the sun.[25] The monogram of M-A has six points, just as has the 'Shield of David'; but whereas that six-pointed star cannot be drawn in one unbroken line, the monogram can be so drawn, just as can the pentagram, ⛤, that five-pointed star to which occult virtues have long and often been attributed, which as a prophylactic device is closely associable with the six-pointed double-triangle.[26]

Although the Virgin Mary appears often in art, and occasionally in amulets,[27] with a lunar crescent beneath her feet, I do not recall any early examples of her association in that special way with the crescent, and I am therefore inclined to think that that particular association quite probably came about through those representations of 'Our Lady of the Immaculate Conception' which have been in part inspired by *Revelation* xii. 1, 'And there appeared a great wonder in heaven; a woman clothed with the sun, and the moon under her feet . . .' Representations of that sort came in, seemingly, in the first quarter of the seventeenth century (the office commemorating the Immaculate Conception was formally instituted in 1615), and were particularly favoured in Spain, where the feast of the Immaculate Conception had already for centuries been observed.[28] I am unable to venture, on my present knowledge, any opinion as to whether or not an earlier specific association of the Virgin with the moon had anything to do with the selection of this text as a basis for the way in which she is so often depicted in Spanish art of the seventeenth century. In view of what I have pointed out above in connexion with considerable interrelations between the four-petalled emblem, a disk, the pair of interlaced triangles, the monogram of 'Maria,' and the sun, on the one side, and lunar crescents on the other, one may (but very tentatively) surmise that the text speaking of the 'woman clothed with the sun' might, long before the seventeenth century, have influenced the constitution of the Spanish amulets in which lunar crescents have a part.

A quite exceptional association of the Virgin Mary with a jet fig-hand (*cf. infra*) and a lunar crescent occurs in a finely-carved fig-hand in the Louvre Museum, which has a human-faced crescent, forming an almost complete circle, in relief on the surface of the hand (instead of embodied within it), and its wrist-portion in the shape of a bust (from the hips upward) of the Virgin crowned and with her hands folded in prayer.[29]

How little distinction the Spaniard of the seventeenth century made between things purely Christian and his crescent-shaped amulets is well illustrated by the pendant shown in Pl. D, 11. This is a cross, with crucifix attached, having pendent from each arm a small crescent from whose inner curve projects a fig-hand.[30] On the back of the cross, at the junction of the arms with the stem, is a circle filled with rays proceeding from its centre, conceivably (although far from certainly) to be associated with the ambiguous 'sun' symbols on the crescents discussed above.

I shall now discuss a number of Spanish amulets in which crescentic forms occur as elements more or less subsidiary to other apotropaic features of the objects wherein they are found.

Human-faced lunar crescents appear as subsidiary elements in the curious, and uniquely Spanish, compound fig-hand amulets made of jet at Santiago de Compostela in the seventeenth century, and perhaps also in the eighteenth. Some typical examples of these are reproduced in Pl. D, 12-16; and by de Osma in his *Catálogo*,[31] nos. 57, 58. The backs of the hand-portions of these objects are without ornamentation, but ornamentation, or symbolization, may occur in the backs of the portions corresponding to the wrist or to the lower arm. These hands, and others analogous but lacking the lunar crescent,[32] have been made for use against the effects of 'evil eye,' 'fascination,' witchcraft, and the like. The material—jet—whereof such fig-hands are made is itself believed, in Spain, to be a powerful protection against such effects[33]; and the amuletic shapes given to it by its carvers have been intended apparently mainly to enhance its virtues in that respect.

The simplest form of lunar crescent in these compound fig-hands of jet is perhaps that shown in Pl. D, 12, which is little more than a sketchy face cut in the edge of the palm. The amulet which embodies it is, however, of considerable interest to us, in that its 'wrist' portion is constituted of four small open-hands, because the open-hand (the European-styled 'Hand of Fatima') was in Moslem Spain a device having

just such prophylactic virtues as were attributed in Christian Spain to the fig-hand, both long previously and subsequently, as in Roman Spain and in Italy itself. The present amulet—for which there are many parallels among jet compound fig-hands [84]—would seem, therefore, testimony strongly suggesting that when Spain became Christian again after the expulsion of the Moslems and the extirpation of Mohammedanism there, and the fig-hand displaced, as an amulet, the open-hand, some belief in the virtues of the latter continued to survive prohibitions of its use openly as an amulet. As early as 1526 a great Junta of prelates and others, convened for the purpose of reforming the customs of the Moslems newly converted to Christianity, forbade the use in any way of plaques 'which they were accustomed to wear,' on which were a hand [*i.e.* the open-hand], with 'certain letters'; and at the same time the silversmiths were prohibited from making *lunas*—that is, lunar crescents—or other insignia 'such as the Moriscos were accustomed to wear' (*cf.* de Osma, p. 22, quoting Bermudez de Pedraza's *Antigüedad y excelencias de Granada*, I, chapter x). The expulsion of the Moriscos from Spain was not undertaken till some three-quarters of a century later, and was completed only in the early seventeenth century. It is, therefore, interesting to find de Osma—a careful scholar—assigning (although tentatively) his nos. 57, 58, to the second third of that century.

In the amulet of Pl. D, 13, the face is sharply defined, and the extremities of the crescent partly enclose two small disks. What—if anything—these disks symbolize, I do not know; but as similar disks accompany the crescents in the amulets of Pl. D, 14, 15, and disks very like them (de Osma, nos. 57, 58), I am inclined to think that they may have had some occult significance. The frequent association of a disk, or of some device to which seemingly some similar meaning was attached, with a lunar crescent in the metallic pendants illustrated and described above, suggests the possibility that the pair of disks is no more than a result of putting into a symmetrical form an element (which by then may well have become merely traditional, its original meaning forgotten) which for a time had been a regular accompaniment of crescent-amulets in Spain.

Perhaps de Osma's no. 58 may appositely be cited in support of a view that the pair of disks is a feature formerly significant but now more or less meaningless. In that fig-hand there is a disk, whose diameter is more than half that of the human-faced crescent, on which is a cross formed of four equal arms set round a small disk, while the two disks attached to the horns of the crescent are much smaller, in proportion to the crescent, than in Pl. D, 13, 14, 15.

The crescents in the amulets of Pl. D, 14, 15, are set horizontally, instead of, as is more usual, vertically. In the case of fig. 14, the horns point upward; in that of fig. 15, as in de Osma's no. 58, they point downward.

An additional design embodied in Pl. D, 15, is what might be taken either for a highly-conventionalized 'heart' or for an M (presumably for 'Maria') shaped as a heart. A similar 'heart' even more closely resembling an M appears in the fig-hand reproduced as fig. 2 in my 'Notes on Spanish Amulets (Third Series),' while on the front of the fragment whose back is shown in Pl. D, 16, an M is formed in the supporting columns at the 'wrist.' Although many Spanish amulets, made of various materials, have the shape of a conventionalized heart, I have not learned of any apotropaic significance attached in Spain to that shape.

In my 'Notes on some contemporary Portuguese Amulets' (*Folk-Lore*, XIX [1908], p. 18), I reported the Portuguese employment (in 1905) of heart-shapes as amulets against evil eye: but I also quoted Dr. Leite de Vasconcellos as saying that he believed 'that the heart, as an amulet, 'is . . . dead in Portugal. It is worn, . . . but 'without any great preservative signification 'being attached to it by the people' It may well be that over a great part of Spain a situation analogous to that of his experience obtains. It should be kept in mind that the Spanish amulets with which I have been concerned have been largely obsolete, or at least obsolescent, so that their original purposes may be now obscured; while, on the other hand, the graceful shapes (and probably also the pleasing mental associations) of 'heart' forms make them favourites for ornaments without occult implications.

In the crescent of Pl. D, 14, the nose is unduly prominent and is sharply pointed: in that of Pl. D, 13, it is even more prominent and has become almost a long isosceles triangle: and in that of Pl. D, 15, it has lost its resemblance to a

nose and become what resembles closely the blade of a dagger, of trapezoidal section, lacking a handle but with the now almost unrecognizable lunar crescent forming the quillons—a tiny protuberance, about the size of a pinhead (the vestige of the eye) on one side of the base of the 'blade,' and an almost imperceptible depression on the other side of the 'blade,' remain as faint traces of the original lineaments of the lunar crescent. Transformations of designs, whether originally symbolic or purely ornamental in function, are a common feature of repetitive art, and have often been not merely recorded, but utilized also as bases for discussion.[35]

I believe that this transformation, from a human profile to something very like a dagger, was by no means merely a result of fancy playing upon an ancient symbol. Perhaps at first the nature of his material led the jet-carver to make the nose somewhat more prominent and more pointed than a strict attention to proportion would have warranted. But subsequently (and possibly, as suggested by close resemblances between other details of the objects involved, always in the same workshop) it would seem that it was considered that, since a sharply pointed, penetrative, shape was a recognized form of protection against evil eye, fascination, and the like,[36] the sharp-pointed nose might itself be utilized as a further protective element of the compound fig-hands. Sharp-pointed weapons, or natural defences—*e.g.* horns, claws, teeth—are very commonly used, among many peoples, as protections against ill-effects arising from occult sources.

I do not recall Spanish applications of images of weapons, as preservative against evil eye and analogous perils, but there is much circumstantial evidence suggesting that such images were indeed so used—for example, if a witch visits a child ill from the effects of *aojo*, a pair of scissors, open in the form of a cross, is put in the patient's doorway, and the witch cannot go out till the scissors are closed again [37]—and broken needles and pieces of broken mirrors (the latter used perhaps not alone because of their sharp points and edges) are recorded as in use against 'fascination' in mediæval Spain.[38] Although tiny images of weapons were formerly made at Albacete, in the forms of the knives, etc., made there, I do not know if any occult virtues were ever attributed to these toy-like objects. In modern Morocco, thorns, bristles, or needles are worn against the effects of evil eye; and, analogously, there are Moroccan preservative expressions suggesting penetration of the evil-working eye.[39] Just so the Spanish Morisco of the fifteenth century correspondingly made use of the expression 'Five in your eye.'[40]

Again, as we shall see, many of the sharp-pointed weapons of animals have served in Spain as protections against evil eye and the like—the horns of stags,[41] the teeth of certain animals,[42] and especially the tusks of boars,[43] the claws or nails of animals,[44] cocks' spurs,[45] the claws of crustaceans,[46] the 'horns' of stag-beetles [47]—and even imitations of such things in other materials.[48] And artificially-shaped pieces of bone or of horn, sometimes in form only remotely resembling natural horns, but always brought to a fairly sharp point,[49] have been and still are quite common children's amulets against evil eye and its analogues. And, finally, the addition, to a normal crescent, of a third 'horn' quite probably was welcomed by those Spaniards who regarded —as noted *infra*—the sharp-pointed horns of the crescent as its most effective protective element. It would seem, therefore, that we need have but little doubt that the transformation of the nose in the amulets of our Pl. D, 13, 14, 15, has been done intentionally and with a view to increasing the preservative powers of the jet fig-hands comprising a human-faced lunar crescent.

In Pl. D, 13, the prominent and sharply pointed nose touches one side of a long ovoid, as if about to penetrate it. Although it be often hazardous to guess at the meaning of conventional designs, I would suggest the possibility that this ovoid symbolizes an eye—*i.e.* the 'evil eye' whose effect is feared—which is threatened by the acutely pointed nose. The fragmentary jet fig-hand (which formerly included a human-faced crescent among its elements) reproduced in Pl. D, 16, shows us what seems to be a parallel to this; between the two open-hands in the wrist-portion is what looks to be a fairly clear representation of a pair of eyes, while seemingly about to penetrate between those eyes is a long spike-like device—a combination by no means unique, since it may be seen (although with the 'eyes' slightly less defined) also on both the front and the back of the jet fig-hand reproduced in 'Notes on Spanish Amulets (Third Series),' fig. L. That my suggestion is not unduly far-fetched is vouched

for, on the one hand by the forms of certain verbal threats, such as those cited above, and on the other by the very considerable number of surviving ancient amuletic objects, obviously protections against the effects of evil eye, in which an eye is surrounded by preservative devices attacking, or about to attack it.[50]

The inclusion of eye-forms in amulets incorporating lunar crescents recalls Westermarck's suggestion (I, p. 473) that crescentic forms having protective connotations may in some instances have been derived from representations of a human eye under an eyebrow, wherein the 'eyebrow' has become metamorphosed into a (simple, not human-faced) lunar crescent, while the 'eye' has become a disk,[51] or perhaps in some cases a star.[52]

In Pl. D, 17, is shown a small section of a large fragment of an earthenware vessel of the late Moslem period in Spain, obtained at Seville and covered with repeated impressions from a group of stamps. On this the crescent, partly enclosing a small disk, is at the tip of the little finger of an open-hand. When complete, the vessel was of considerable size and had round it a band of two rows of these impressions. The fragment is peculiarly interesting, in view of the various combinations of crescents with hands and/or with disks, of which I have already spoken at length. Open-hands alone, or associated with other Moslem designs preservative against evil eye and the like, were quite common on Spanish-Moslem pottery.

We have seen how commonly lunar crescents appear in Spain associated with other apotropaic devices to form compound amulets—sometimes, as in Pl. D, 2-9, as the foundation of the amulet; sometimes, as in Pl. D, 12-15, as a subsidiary factor. The same may be observed in Portugal[53] and in Italy,[54] as well as among modern Moslem peoples. It would seem probable that there is nothing more behind such frequent use than the desire to use a favourite amuletic symbol for the purpose of assisting another protective device, yet the constant recurrence of the phenomenon suggests the possibility that there may anciently have been some idea that the power of the moon (or of some moon-divinity) gave special virtue to certain protective devices. In this connexion we may quote Elworthy (*Evil Eye*, p. 446): 'The 'moon, indeed, was thought to preside over the 'art of pharmacy, while *Hecate*, who, as we have 'seen, was but one of the persons or attributes of 'Artemis or Diana Triformis, was supposed to 'have been the inventor of it. Hence both these 'goddesses, really the same, were invoked by its 'adepts. . . . To this great art of pharmacy . . . 'belong all the charms, amulets, and enchant-'ments against poison, venom of serpents, with 'all diseases.'

Non-lunar Crescents.—Although the crescent seems to owe its employment, as an amulet, in Spain to its service as a symbol of the moon, it is there sometimes looked upon as deriving its virtues from its resemblance to a pair of horns.[55] That this view may well be ancient in the Iberian Peninsula is suggested by what seems to have been a cult of cows or of bulls there. Diodorus speaks of a legend mentioning a cow-cult among the Iberians[56]; and there survive a considerable number of Lusitanian or Iberian coins of the Roman period, having on one face a bull, which have been pierced with a hole so that they may be worn, with the animal upright, as amulets.[57] It is interesting to find, on two of the coins so used,[58] a small crescent a little above the back of the beast. Curiously, in both these coins the perforation has almost obliterated the crescent—presumably quite fortuitously and because the crescent chanced to be at the spot most suitable for hanging the animal upright.

Closely allied to the crescent in form is the 'sign of the horns,' made by extending the little finger and the index from a hand otherwise closed. This is the well-known gesture, in Italy considered to be extremely efficacious against evil eye and the like—but employed also with other intentions—and termed the '*mano cornuta*.'[59] Salillas says (*l.c.*, p. 74) that in Andalusia one protects oneself against the evil influence of a snake (should that reptile 'be named or reproduced in any way') by making this gesture accompanied by certain other acts; he does not, however, specifically associate this gesticulated pair of horns with the pair to which, as he had said previously, the powers of crescentic amulets are by some persons attributed.

Of the possibility that certain Spanish crescent-amulets have been derived from pairs of boars' tusks or of animals' claws, rather than from lunar symbols, I have spoken already.

Crescents against Effects of the Moon.—I think that we may reasonably believe that by Spaniards, as by other peoples whose civilizations have been

based on those of Ancient Rome or of Islam, crescents have been most commonly employed as preservatives against harm due to *humaŋ* agencies of occult natures—'evil eye,' envy, witchcraft, and the like. There is, however, in Spain as in Portugal, also a widespread belief in an influence, of the same general character, which may be exercised by the moon. Frazer cites [60] Ancient Greek, Armenian, and Brazilian Indian beliefs to the same effect. Of these, the Greek most interests us, as perhaps the source whence were derived the Spanish ideas. Without fuller particulars, we cannot judge whether the Brazilian Indian belief was indigenous, or a result of Portuguese influence. I am inclined to think that the depicting of the lunar crescent with a human profile within its curve may be related to this belief, rather than to any identification of the moon with some one of the great divinities with which it has, among various peoples, been associated. It is perhaps because of the parallelism, between the supposed 'fascination' exercised by the human eye and that exercised by the moon, that even when the crescent's human features have become much degenerated, as in the amulet of Pl. D, 15, the *eye* remains distinct. It seems, indeed, open to argument whether in at least some cases in Spain the belief in lunar crescents as protective against humanly-originated evils may not be a degenerated relic of an earlier employment against evils deriving from the moon, rather than a result of an assumption that some beneficient divinity associated with the moon would serve as protector against the evils in question: but concerning this, I have too little material as basis for an opinion.

Salillas speaks at some length of the supposed effects of the moon on small children.[61] A medical informant wrote him from the Canary Islands, whose culture is purely Spanish, that 'It 'is believed that the pernicious influence of the 'moon on babies, if it be not counteracted by the 'visual power of the infants, is unquestionable'; and that if the child did not see the moon at the time the rays fell upon it, it would suffer from eruptions, obstinate stomach-pains, etc. I have recorded [62] the wearing in Portugal of 'individual 'crescents . . . by babies, principally to protect 'them from the supposed pernicious effect of the 'moon, which, it was said, causes an illness, '*fuada*, of the nature of stomach trouble or colic.' To cure an infant so affected, says Salillas, in Spain certain things associated with it are put into its swaddling-clothes and thrown onto the roof 'so that the moon may see them,' this action serving as a sort of vaccine-virus ('*vacuna*') for the child. Furthermore, so that the child may be released from the effects, certain other things are done, ending with the recitation of a certain verse.

Practices in which, for its benefit in some way, things associated with an infant are put on the roof of its home, are widely spread. While they are explained in various ways, I have no other example in which, as here, the moon is brought into them. Thus, to take only Frazer's citations [63] for the group concerned with teething, we have Russian-Jewish, Polynesian, Sinhalese, and Cherokee Indian ones connected (as are many examples of other kinds) with rodents (whose strong teeth the child's should take after), and a Macedonian one (p. 180) connected with crows. Westermarck cites (*l.c.*, I, p. 129) many Moroccan practices in which the child's fallen tooth is thrown towards the sun; and Frazer (pp. 181 f.) mentions similar practices among the heathen Arabs and the peasants of the Lebanon.

Again, in Cáceres, should an infant be *afunada* (*i.e.* made ill through exposure to the moon), it should wear at its waist a small 'half-moon' (=a lunar crescent) formed, during the offices of Holy Thursday, of steel.[64] Salillas also tells us (p. 81) that in Alcuestar a half-moon is placed on babies so that 'the moon does not *coja* [65] them': and in Hervás 'to free them from the disorders 'which the moon is able to produce.' He appears to be speaking (p. 77) of the effects of *mal de ojo*, where he refers to the use of the *media luna* in the Provinces of Salamanca, Cáceres, and Badajoz, and in Mata de Alcántara, in Hervás, and in Llerena; but I am uncertain whether or not this is due to confused writing.

Ismael del Pan, writing of the people of the Province of Toledo, and not of Spaniards in general, gives us a good deal on the matter, under the heading of 'El Mal de Ojo que hace la Luna.'[66] He says that the people 'of our *pais*' (presumably the Toledan region) accept 'as something 'proven' that the moon is able to produce *mal de ojo*; and that in the Province of Toledo 'this 'belief does not appear to be very closely defined,' but that from the several matters he cites 'one 'may deduce that the malign power of the moon 'is a fact' among the people there. He had a

note from Consuegra, saying that someone there told him 'that in that town, in order that the 'moon should not "coja" children, one ought to 'hang at their necks a half-moon made of jet.' Further, that in the town of Huecas it is said 'that 'the light of the moon injures the sight, and above 'all that of children, upon whom it is customary 'to place a half-moon as a preservative amulet.' In Huecas, too, one may often hear it said, 'Do 'not gaze at the moon, which will injure your 'sight, though St. Lucy [patroness of the eyes] 'can cure it.' He concludes by saying that he had no data concerning the *ojo* of the moon in other parts of Spain; 'although perhaps one 'dare conjecture that probably the belief has 'had, and has, a wide extension, if one takes 'into account the series of invocations and 'orations to the "new moon" which are in use 'even in regions of our nation far distant from 'each other.'

Curiously, del Pan was unable to obtain an infant's crescent-amulet from the Toledan district. A friend, however, got for him a silver one, in the form of a circle within which was a human-faced lunar crescent, from Badajoz (a Province adjoining that of Toledo, but also adjoining Portugal [67]), which was to be hung at a child's neck, so that the moon might not *coja* the child. 'Half-moons' of this kind, which are generally of silver, are often quite large. His friend informed him, further, that the belief in the evil influence of the moon was quite common in the whole Province of Badajoz, and also that such amulets were worn less frequently by girls than by boys, because the girls wore instead a bracelet made of red coral beads,[68] with respect to which the mothers said that if the beads turned yellow, 'the moon had affected the little one, who would 'be ill till the red colour reappeared in the 'corals.' His friend added, however, that he had observed that some girls wore both a crescent-amulet and the coral beads.

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[1] On ancient uses of crescent-forms as amulets, see Seligmann, S.: *Der böse Blick*, Hamburg, 1910, II, pp. 138 ff.; on recent uses, *ibid.*, p. 140, and Westermarck, E.: *Ritual and Belief in Morocco*, London, 1926, I, pp. 472 f., n.

[2] For examples, *cf.* Elworthy, F. T.: *The Evil Eye*, London, 1895, p. 260, and *Horns of Honour*, London, 1900, pp. 14, 175 f.

[3] Westermarck, *l.c.*

[4] Crescent-forms occur in Spanish jewellery, traditionally of 'Moorish' types, but whether with amuletic intent or not, I do not know.

[5] *Cf.* my 'Notes on Spanish Amulets,' in *Folk-Lore*, XVII (1906), pl. vii, fig. 13, and p. 457.

[6] An Ancient Roman one, extremely like the Spanish ones just cited, has been reproduced by G. [sometimes J.] Bellucci, in *Il Feticismo primitivo in Italia* (in the series '*Tradizioni popolari italiane*'), Perugia, 1907, fig. 31; a modern Neapolitan one, for a cab-horse, apparently identical with mine from Granada, has been reproduced by Elworthy, *Evil Eye*, fig. 84.

[7] One in my possession, obtained at Tours, has a hole, instead of a projecting loop, to take the strap.

[8] In *Parallèles ethnographiques—Amulettes: Libye actuelle—Italie ancienne* (in the series '*Trad. pop. ital.*'), fig. 23. He reproduces there also, in fig. 21, a photograph of a Roman terracotta statuette, found near Arezzo, of a boy wearing a simple (*i.e.* not human-faced) crescent, points downward, at his neck. The Roman crescent cited in n. 6, *supra*, is there reproduced in fig. 22.

[9] *Cf.* my 'Notes on some contemporary Portuguese Amulets,' in *Folk-Lore*, XIX (1908), figs. 16, 17, and 34, 35, 38; Leite de Vasconcellos, J.: 'Amuletos,' in *O Archeologo Portuguès*, V (1899–1900), p. 289.

[10] It should be remarked, in this connexion, that Badajoz Province adjoins Portugal, and that the town of Badajoz lies just within the Spanish frontier, so that in this particular case strong Portuguese influences may be suspected.

[11] On this curious amulet, see Gautier, R. T.: 'The Cimaruta,' in *Folk-Lore*, XVI (1905); and Elworthy, *Evil Eye*, pp. 343–55 (with fig. 162, which includes among its elements both a human-faced crescent and a five-petalled flower, assumed by Elworthy to represent a lotus-flower).

[12] *Cf.* my 'Notes on Spanish Amulets (Fourth Series),' in *Folk-Lore*, XXVI (1915), fig. 38. The Badajoz amulet, cited above, is of analogous ring-form.

[13] For example, 'La *figa*, en valenciano actual, es la vulva' (Salillas, R.: *La Fascinación en España*, Madrid, 1905, p. 76, n.). Several other meanings have sporadically been attributed to the fig-hand, but, I think, through unsound reasoning.

[14] *Cf.* Westermarck: I, pp. 459 ff.

[15] *N. H.*, XXXVII, 40 (Bohn's ed., London, 1857).

[16] *Cf.* Westermarck, I, p. 469, fig. 124.

[17] *Ibid.*, p. 473, with fig. 126.

[18] The Carthaginians were settled in Spain in the sixth century, and their domination there was ended by the Romans in 208 B.C.

[19] *Cf.* Bellucci: *Il Feticismo primitivo . . .*, fig. 14 (or *Gli Amuleti: Un Capitolo di Psicologia popolare* [in the series '*Trad. pop. ital.*'], fig. 30), showing a boar's tusk, mounted for suspension in a bronze socket, found in an Early Iron Age necropolis in Ancona, and a 'very common' contemporary child's amulet, against evil eye and witches, consisting of a boar's tusk in a silver socket for suspension.

[20] Two of these were definitely for children; the third (fig. 16) was said (although without confirmation) to have been worn by a woman to secure (obviously because of its colour) abundant lactation while nursing. Among a list, obtained from correspondents in various parts of Spain, of amulets against *mal de ojo*, given by Salillas (*l.c.*, p. 74), are a hog's tusk (Coruña) and a wild-boar's tusk (Almería). Ginés de Posadilla, in a note (pp. 63 ff.) in his *Auto de Fe celebrado en la Ciudad de Logroño . . . 1610*, Madrid, 1811, refers to a wild-boar's tusk as a protection for children against *brujos*. Westermarck, *l.c.*, I, p. 463, says 'The crooked tusk of a wild-boar is 'a charm against the evil eye; [in Morocco] both Arabs

' and Berbers hang it round the neck of a horse, . . .' (*cf.* also, *l.c.*, II, p. 314).

[31] For much on this, see Ridgeway, W.: 'The Origin of the Turkish Crescent,' in *J.H.A.I.*, XI (1908), pp. 241–8.

[32] Although this recalls the head-dress of some of the Ancient Egyptian divinities, I am inclined to think that the parallelism is entirely fortuitous.

[33] de Osma, G. J.: *Catálogo de Azabaches compostelanos*, Madrid, 1916, no. 58.

[34] An analogous combination, consisting of an upward-pointing open-hand above whose fingers are an upward-pointing crescent and a small ' star ' composed of two interlaced triangles, appears as a decoration on certain shallow drums used in Tunis (*cf.* Elworthy, *Evil Eye*, p. 250, fig. 108). A similar combination appears in Algeria, in a lintel-design which has, in a horizontal row, from left to right, a pair of interlaced triangles forming a ' star,' an upward-pointing crescent, and an upward-pointing open-hand (*cf.* Lamormant, E.: in *Gaz. archéol.*, III [1877], p. 37; the design reproduced also by Seligmann, *Der böse Blick*, fig. 83, and by Leite de Vasconcellos, *Signum Salomonis*, Lisbon, 1918 [reprinted from *O Archeologo Portuguès*, nos. 1–12, 1918]). Such six-pointed forms occur in Moslem-Spanish ornamentation; but I do not recall any on modern Spanish amulets, excepting certain common Moroccan copper coins occasionally carried by Spaniards as supposedly protective.

[35] *Cf.* Psalms, lxxxiv, 11: ' For the Lord God is a sun and a shield.' It is interesting that Elworthy, speaking of the interlaced triangles on the Tunisian drums (*cf.* n. 24, *supra*), says that he believes the figure to represent the sun.

[36] For much on this, as well as on the relationship between the five-pointed and the six-pointed forms, see *Signum Salomonis*. For a number of amulets in which the five-pointed form is associated with a human-faced lunar crescent, see pl. IX of this, and my ' Notes on . . . Portuguese Amulets,' *Folk-Lore*, XIX (1908), pl. III.

[37] *E.g.*, in some Portuguese silver compound amulets; *cf.* my ' Notes on . . . Portuguese Amulets,' figs. 39–42 (and a simple amulet consisting of the Virgin standing on a crescent, fig. 18), and *Signum Salomonis*, fig. 112 (and also fig. 115, which shows her on a crescent, on one side of a medal whose reverse carries a human-faced crescent, a pentagram, a fig-hand, and a key).

[38] For much relating to the subject, see Jameson, A. B.: *Legends of the Madonna*, ' Devotional Subjects,' s.v. ' Our Lady of the Immaculate Conception.' In the seventeenth-century paintings and sculpture, her lunar crescent is sometimes depicted horns upward, sometimes horns downward; occasionally the whole of the lunar disk is represented.

[39] de Osma, p. xi. Figures of other saints, in corresponding positions, are fairly common; *cf.* n. 32.

[40] A similar pendant, in my possession, is a silver-gilt cross with crucifix, of about the same size, from each of whose arms, and from whose foot, hangs a small fig-hand. A comparable silver-gilt pendant of another sort is heart-shaped, with a tiny image of the Virgin (seemingly standing on a crescent moon) and Child set among filigree disks, with small fig-hands pendent from it.

[41] de Osma, *Catálogo de Azabaches compostelanos*.

[42] *Cf.* de Osma, *l.c.*, nos. 53, 59, 60, 61, 63, 64; in some cases (*e.g.* no. 53) the portion above the hand itself takes the shape of a Christian saint (for further examples of this, but now lacking their hand-portions, see nos. 52, 54, 55, 56).

[43] For much on this, and on fig-hands as amulets in Spain, see *l.c.*, chapter I, ' Los Amuletos en azabache y la superstición del Aojo.'

[44] *E.g.* de Osma, *l.c.*, nos. 57, 58; and my ' Notes on Spanish Amulets (Third Series),' *Folk-Lore*, XXV (1914), fig. 1.

[45] *Cf.* Goblet d'Alviella, E.: *The Migration of Symbols*, London, 1894 (*La Migration des symboles*, Paris, 1891). Much other work of the kind could be cited.

[46] Salillas, R.: *La Fascinación en España*, Madrid, 1905, pp. 75, 78, stresses the ' penetrative ' character-istic of certain Spanish amulets for such purposes. It may be observed that the design of the amulet of Pl. D, 15 looks rather as if intended to emphasize the penetrative power of the ' dagger.'

[47] del Pan, Ismael: *Folklore Toledano*, I, Toledo, 1932, p. 84.

[48] de Osma, p. 16, quoting Enrique de Villena's *Tratado de el arte de fascinación*, written in 1411.

[49] Westermarck, E.: *Ritual and Belief in Morocco*, London, 1926, I, pp. 434 *f.*, 445 *f.*

[50] de Osma, pp. 17, 20.

[51] For some typical examples, see my ' Notes on Spanish Amulets,' *Folk-Lore*, XVII (1906), figs. 1–4; ' Notes on Spanish Amulets (Fourth Series),' *Folk-Lore*, XXVI (1915), figs. 1–4.

[52] Fossil sharks' teeth, ' Notes on Spanish Amulets,' fig. 30 (and two other examples not yet published); teeth said to be of pigs or of wild boars, *l.c.*, figs. 37, 38; a canine tooth seemingly of some carnivorous animal (unpublished); crocodile's tooth, ' Notes on Spanish Amulets (Third Series),' fig. 17; wolves' teeth, de Osma, p. 17, citing de Villena, *Tratado*.

[53] Typical examples in ' Notes on Spanish Amulets,' figs. 16, 17, 18.

[54] de Osma, p. 21, referring to the beginning of the seventeenth century.

[55] ' Notes on Spanish Amulets (Third Series),' fig. 11; Salillas, p. 77.

[56] ' Notes on Spanish Amulets,' fig. 19; ' Notes on Spanish Amulets (Third Series),' fig. 10.

[57] Salillas, p. 77.

[58] ' Notes on Spanish Amulets,' figs. 9 (bone), 10 (cow's horn or tortoiseshell), 11 (red coral), 12 (glass).

[59] *Ibid.*, figs. 8, 40, both straight; figs. 6, 7, both slightly curved, as probably related to horns.

[60] Elworthy, *Evil Eye*, pp. 129–33, 137–41, figs. 14–19, 24; Seligmann, *Der böse Blick*, II, pp. 151–5, figs. 117–25.

[61] Westermarck, figs. 120 and 124, from Punic originals.

[62] *Ibid.*, p. 473, n. 1.

[63] ' Notes on . . . Portuguese Amulets,' fig. 19, where several amuletic symbols are contained within a human-faced crescent; figs. 18–23, 42, where the crescent is a subsidiary factor; figs. 33–35, where it is individualized but is a loose member of a group. Further examples of the same thing are shown in Leite de Vasconcellos, J., *Signum Salomonis*, Lisbon, 1918, figs. 105–7; and figs. 104, 108, 110–2, 115.

[64] *E.g.*, in the *cimarutu* (*cf.* Gunther, R. T.: *Folk-Lore*, XVI [1905]; Elworthy, *Evil Eye*, pp. 343–55) and in the combinations of crescents with frogs, busts of St. Donatus, or the numeral ' 13 ' (Bellucci: *Gli Amuleti*, Perugia, 1908, figs. 25, 26, 28; *Il Feticismo primitivo in Italia*, Perugia, 1907, figs. 62, 64–6).

[65] Salillas, p. 77. Horns, or small simulacra (made of a variety of materials, including the horns of animals; *cf.* n. 48, *supra*) of horns, are among the amulets most commonly worn in Spain against the effects of evil eye, fascination, etc.

[66] *Diodorus*, IV, 18, 3, cited by Leite de Vasconcellos: ' Signification religieuse, en Lusitanie, de quelques

mountains percées d'un trou," in *O Archeologo Portuguès*, X (1905), p. 174.

[37] Leite de Vasconcellos, *l.c.*, figs. 7–13; he quotes Paris, P.: *Essai sur l'art et l'industrie de l'Espagne primitive*, Paris, 1903–4, referring to these types of coins and to Iberian small plaques, little bronze *ex votos*, and other things, on which oxen or bulls are represented.

[38] Leite de Vasconcellos, *l.c.*, figs. 7, 9.

[39] For much concerning it, *see* Elworthy, *Evil Eye*, pp. 261–6.

[40] *Adonis Attis Osiris*, 1914, II, p. 148.

[41] *La Fascinación en España*, pp. 46 f.

[42] 'Notes on . . . Portuguese Amulets,' p. 217.

[43] *The Magic Art*, I, 1917, pp. 178 ff.

[44] Salillas, *l.c.*

[45] *Cuja* (? dialect), from '*coger*' = 'to seize,' 'to attack unexpectedly.'

[46] *Folklore Toledano*, I, pp. 98–100.

[47] Simple anthropomorphised crescents, as amulets, appear to be rare in Spain, though common in Portugal; *cf.* n. 10, above.

[48] Red coral is commonly used against 'evil eye' in Spain; *cf.* 'Notes on Spanish Amulets,' p. 460.

EARLY RECORDS OF IRON IN ABYSSINIA. *By G. A. Wainwright.*

43 The introduction of iron to these regions clearly originated with the Ptolemaic hunting expeditions, which were organized for the capture of elephants. Their influence would have begun under Ptolemy II, 283–245 B.C., but he did not go farther south than Philotera-Qosseir which is still in Egyptian territory, and Ptolemais Epitheras which is probably near Suakin (Strabo, XVI, iv, §§ 5, 7). Ptolemy III, 245–222 B.C., is the first to interest us here, and the establishments were maintained until the time of Ptolemy V, 203–181 B.C. Thus, the influence of Ptolemaic Egypt was felt for a couple of generations, and was exercised from a series of establishments strung out along the coast nearly as far as Notu-ceras, the Horn of Africa (Strabo, XVI, iv, §§ 14, 15).[1] Even as far away as the Somali coast between Deire (the Straits of Bab el Mandeb) and Notu-ceras the coastlands were sufficiently well occupied for five of the chief huntsmen—Pytholaos, Lichas, Pythangelos, Leon, and Charimortos—to set up pillars and altars (Strabo, XVI, iv, § 15).

North of the Straits of Bab el Mandeb, near the modern Massawa, Adulis was an important centre of activity. Here Ptolemy III set up an inscription in Greek recording that he captured elephants.[2] From here the huntsmen spread inland, and clearly had a centre at Aksum, a place which later was to become the capital of a kingdom and the sacred city of the Ethiopians. At Aksum a block of stone has been recorded which at the time of its discovery still preserved the name of Ptolemy III Euergetes in Greek. There was also found there one of those magical hieroglyphic tablets so well known in Egypt from the fourth century B.C. onwards, and called by archaeologists *cippi* of Horus.[3] They are charms against every sort of noxious beast: crocodiles, serpents, scorpions, lions, etc. The Aksumite specimen must have been brought from Egypt by one of the huntsmen, though it is of some size, in fact about as large as they are commonly made, being 17 in. by 6 in.

The activities of these huntsmen opened up Africa to trade. We have a papyrus which was written in the first half, or possibly the middle, of the second century B.C., that is to say, at the time that the hunting establishments were being closed down. It is the bond for a loan which five men were raising for a trading voyage to the Incense Country,[4] and of this more in the next paragraph. In East Africa itself trade was already filtering down as far as Durban in Natal. At that place a coin of Simon Maccabæus, 143–136 B.C., has been dug up at Marianhill just behind the harbour.[5] At Msasani, a little north of Dar es-Salaam, a coin of Ptolemy X Soter, 115–80 B.C., has been found.[6] Not very far from Msasani it has been shown that certain customs to be found on the mainland and on the island of Zanzibar clearly originate in Egypt and Greece.[7]

The date of the above-mentioned papyrus combined with the status of the partners in the trading company suggests an interesting sidelight on the growth of this trade. Four of the company

[1] For all this, *see* Wainwright in MAN, 1940, No. 102.

[2] McCrindle, J. W.: *The Christian Topography of Cosmas, an Egyptian Monk*, London, Hakluyt Society, 1897, pp. 57–59.

[3] Bruce, J.: *Travels to Discover the Sources of the Nile*, 1790, 4°, i, Plates facing pp. 417, 418; iii, p. 132.

[4] Wilcken in *Zeitschrift für Ägyptische Sprache und Altertumskunde*, lx, pp. 96–98. For the date, *see* p. 91.

[5] Otto and Stratmann in *Anthropos*, 1909, iv, pp. 168, 169.

[6] Ingrams in MAN, 1925, No. 86, p. 140.

[7] Wainwright in MAN, 1940, No. 102.

were officers of the mercenaries, and the fifth was a seafaring man in the merchant service. It looks as if the officers had been employed in the elephant hunts, and that the shutting down of these stations had deprived them of their living, and so they took to trade instead. Being no sailors they took a sea-captain into partnership; clearly to sail their ship for them. They had not much money as they had to raise a loan with which to get started. If they had already been hunting elephants on the coast of Somaliland, they would know the conditions and prospects down south, and it would be natural for them to turn to the south seas when thinking of making their fortunes. They must have known all about the frankincense trade, for the tree grows on the African coast of the Gulf of Aden * just where the hunting-grounds had been established. Moreover, the incense trade must have offered splendid profits to those who were not afraid to adventure into foreign parts.

Although they came to East Africa from Egypt, the leaders of the hunting expeditions were largely adventurers from Greece and Asia Minor. Lichas was an Akarnanian, Charimortos was an Ætolian, Alexander an Oroandian from Pisidia, and his second in command, Apoasis, was also a Pisidian coming from the not far distant city of Etenna.[9] The trading company was an even more cosmopolitan affair, the five partners being a Thessalonican, an Elean from southern Italy, a Massaliot, a Carthaginian, and a man who bore the same Celtic name, Cintus, as the Massaliot and so probably came from Marseilles also.[10]

Probably all of them were disreputable characters. We actually know that Charimortos was a man 'of coarse manners and drunken habits' with whose help the avaricious General Scopas 'had absolutely pillaged the kingdom.'[11] In fact conditions in East Africa must have been very like those at Khartum in the early and middle nineteenth century. Society there was composed of little else but every sort of scoundrel and ruffian from every country of the Near East mixed with similar characters from various European countries. In fact, it was said that anyone who had made his own country too hot to hold him migrated to Constantinople, when that place became uncomfortable he moved on to Cairo, and, if he were too bad even for that, he drifted up to Khartum. Thus, we find that the opening up of Africa in the last centuries B.C. was taking place under the auspices of Egypt, just as it did some two thousand years later, and on each occasion the majority of the agents were not Egyptians but were mostly from the north side of the Mediterranean.

The ancient opening up of Africa was carried out by people coming from countries where the Iron Age had long been established. One must, therefore, presume that these pioneers of progress were using tools and weapons of iron, and so would have introduced a knowledge of that metal to the countries they visited. Anyhow, it is the fact that some time after these activities the first written document we have concerning trade in these parts shows the desire for iron on the part of the natives. It is especially prominent round about the Ptolemaic centre of Adulis, and the iron was used there for the same purpose that the Ptolemaic expeditions had gone there, i.e. for elephant hunting.

This document is the Periplus of the Erythræan Sea, and it was written within a few years of A.D. 60,[12] about two hundred and fifty years after the shutting down of the Ptolemaic hunting establishments. In it we are told that on the coast round about Adulis, near the modern Massawa, 'There are imported into these places '. . . iron, which is made into spears used 'against the elephants and other wild beasts, 'and in their wars. Besides these, small axes 'are imported, and adzes and swords: . . . 'Likewise from the district of Ariaca (the north-'west coast of India) across this sea, there are im-'ported Indian iron, and steel (σίδηρος Ἰνδικός, 'καὶ στόμωμα), and Indian cotton cloth,' § 6, p. 24. Though it is not so stated, the axes, adzes, and swords must at this time have been of iron. In § 8, p. 25, we find that into Malao

* Strabo, XVI, iv, § 14. Schoff, W. H.: *The Periplus of the Erythræan Sea*, pp. 23, 26, §§ 8, 9, 10, 11, 12. Cosmas, McCrindle, *op. cit.*, p. 51. Kempthorne in Harris, W. C.: *The Highlands of Æthiopia*, i, pp. 428 ff., describes the tree, the gathering of the incense, and its export to the markets on the opposite coast of South Arabia in the nineteenth century. Paulitschke, *Ethnographie Nordost-Afrikas*, p. 219, says that Somaliland exports as much as 100 to 200 tons of incense annually.

[9] Hall in *Classical Review*, xii, 1898, p. 276. For other details of the chief huntsmen and the hunts, see Rostovtzeff in *Archiv für Papyrusforschung*, iv, 1908, pp. 302, 303.

[10] Wilcken, *l.c.*

[11] Polybius, *Histories*, xviii, 55.

[12] Schoff's edn., p. 15.

(Berberah) there is imported '. . . iron, and 'gold and silver coin not much,' and in § 10, p. 26, the author says that at Mosyllum (Ras Hantarah) the people are willing to import '. . . a very little iron, and glass.'

Evidently the superiority of iron weapons over more primitive ones had been impressed upon the natives in the neighbourhood of Adulis. No doubt the same lesson had been learned to some extent by the natives of the other places up and down the coast at which the Ptolemies had established hunting stations. But, as it happens, it is only at Berberah and Ras Hantarah that we hear of iron being wanted, and even then at the latter place only 'a very little.'

Trade round these coasts was still just as international as it had been two hundred years before. The author of the Periplus says that there was a trading community established on the Island of Socotra (Dioscorida), and that it consisted of Arabs, and Indians, and Greeks.[13]

Three hundred years later than the Periplus, about A.D. 350, we hear of iron once more. This time it comes from the west; from the Island of Meroe. Æizana, the then king of Aksum, has left a long inscription in Ethipoic recording his conquests. He says that he conquered the Noba (Nubians) and 'burned 'their cities of masonry and of straw and [my 'people] plundered their corn, and their bronze '(*birti*), and their iron (*ḥaṣa*), and their . . .' Æizana says that he set up his throne at the junction of the Nile (Seda) and the Athara (Takazze).[14] This is north of Meroe, so a fragmentary inscription which comes from Meroe itself is almost certainly a tangible record of his expedition. This one is written in Greek as are some of Æizana's inscriptions, and treats of the conquest by a '[king of the Aksu]mites and 'Homerites,' whose name is lost.[15]

Some one hundred and seventy years later again, in the year A.D. 522, Cosmas Indicopleustes was travelling down the Red Sea, and he has left us the account of the iron trade in exchange for gold which has been reproduced in the companion article.[16] Cosmas' relevant remarks are extracted here for ease in reference. He says that the caravan of 'upwards, say, of five 'hundred' merchants accompanying the king's agents start out from the country of Agau. 'They take along with them to the mining 'district oxen, lumps of salt, and iron, and when 'they reach its neighbourhood they make a halt 'at a certain spot and form an encampment, 'which they fence round with a great hedge of 'thorns.' Then ensues the dumb trade, the merchants laying out their wares and the natives coming and putting their nuggets of gold on whatever pleases them. As was shown in the companion article the information about the gold makes it certain that it was the country of Fazoqli that imported the iron in this way. Further, we note that the demand was sufficient to make it worth while for the merchants to undertake a journey of six months.

In the latter part of the eighteenth century A.D. iron was still one of the commodities that the natives of Fazoqli bought with their 'gold 'in small pellets' from the Agaus.[17] At this time they were also getting iron from the direction of the Sudan, for at Guba there was a market where the Shangalla (natives of Fazoqli) sold gold and slaves to the Muslims in return for iron and coarse cotton cloth.[18] This iron probably came from Sennaar, for Guba is on the way there from Fazoqli. In that case it probably originated in Kordofan, whence Sennaar was importing iron in the opening years of the nineteenth century A.D.[19]

At that time iron was still a sufficient rarity in Fazoqli for the natives to save it for making splitting tools or ornaments. They did not waste it on ordinary tools for digging which would have worn it away, but for this they used hoes of wood.[20]

[13] Schoff's edn., *op. cit.*, p. 34, § 30. For the identification of this place, *see* p. 133.

[14] Littmann, E.: *Deutsche Aksum-Expedition*, iv, pp. 33, 34, ll. 19, 29, 39, 40. The last word is damaged, and can be restored as *nəḥis* 'copper,' as Littmann does, or as *fas* 'strips of dried meat,' as Nöldeke does in *Zeitschrift der deutschen morgenländischen Gesellschaft*, lxvii, p. 791. Seeing that bronze has just been named Nöldeke's restoration seems the more probable, but fortunately neither of the possibilities concerns us here. For a study of Æizana's reign, *see* Littmann, *op. cit.*, i, pp. 48 ff.

[15] Sayce in *Proceedings of the Society of Biblical Archæology*, 1909, pp. 189, 190, and Pl. XXIV.

[16] *Cosmas and the Gold Trade of Fazoqli* in MAN, 1942, 39.

[17] Bruce, *op. cit.*, ii, p. 432; iii, p. 737. Their other purchases were copper, beads, and skins, but salt is not mentioned, though it was wanted in the sixth century, is so greatly in demand in Africa as a rule, and in Abyssinia even has a currency value.

[18] Bruce, *op. cit.*, ii, pp. 438, 439.

[19] Cailliaud: *op. cit.*, ii, p. 295.

[20] *Ibid.*, *op. cit.*, iii, p. 16.

The natives of Fazoqli were no doubt entirely dependent for iron on their imports. It is unlikely that they were able to smelt it for themselves, seeing that in the nineteenth century they did not even know how to melt their native gold.[21] But it seems likely that they knew how to smith the iron they imported. Whether in the sixth or the eighteenth centuries there is no mention of the import of iron tools or utensils, but merely of iron, which implies that it was only in the unworked form of bars or pigs.

The history of the iron for gold trade in Fazoqli is not the only testimony that we have to the permanence of conditions in East Africa, for we find it again in Somaliland. In the early nineteenth century the natives at Berberah[22] were buying iron and other things from the *baniaas* (Indian traders especially those from Gujerat), just as in the first century A.D., 'from the district of Ariaca (Cutch, Kathiawar, and Gujerat) across the sea there are imported Indian iron, and steel, and Indian cotton cloth' into Adulis near the modern Massawa.

On the River Toumat in Fazoqli, where the natives imported it in Cosmas' day, iron is called *d'ong* by the present inhabitants.[23] It is evidently the same word as the *dogn*, *dun* of the Berta dialects which are spoken along the Abyssinian border from the River Yabus to Roseires.[24] The Uduk who live nearby call iron *tongkutur*.[25] Is it possible that this form includes the word also? The Uduk language is unrelated, at least to the neighbouring Burun languages, and the people are said to have come from Abyssinia five days beyond Arwa on the far side of the Galla country.[26] But I have not found anything like this in any of the languages of the Abyssinian world. At the end of the fifteenth century A.D. there was a migration of Shilluks into these parts.[27] Yet neither Shilluk nor any of the Nilotic languages that I have been able to find call iron by any word the least like *d'ong*. Yet again, in the eighteenth century there were many 'Nubians' in the country, who came from Gebels Tagale and Eliri in south-eastern Kordofan,[28] but in the same way the words for iron in those countries bear no resemblance to *d'ong*. Neither is the word anything like those used for iron on the *gebels* near *Fazoqli*,[29] with the exception of those just mentioned. Can *d'ong* be, therefore, some ancient word which has come through to the present day?

Iron is called in the

ABYSSINIAN WORLD: *ḥaṣin*, Ethiopic[30]; *ḥaṣin*, Tigré[31]; *kəšin*, Barea[32]; *haṭin*, Beni Amer[33]; *aṣin*, Chamir[34]; *akina (akinnu)*, Waag Agau or Hhamara.[35]

birat, Amharic[36]; *birat*, Harari[37]; *birta*, Saho[38]; *berta*, *birta*, Dankali or Afar[39]; *birr*, *bir-ti* (plur), Somali[40]; *birato*, *turo*[41], *giwo*[42] Kaffa; *birto*, Gonga[43]; *berro* (*ber*), Agau[44]; *berətish* (*berti*) Gafat.[45]

zibila, *zibili*, Galla[46]; *sirila*, Ariangulu[47]; *sibilla guratscha*, Oromo.[48]

bida, *dolda*, Kunama[49]; *beda*, Takazze Shangalla[50]; *ŝaqa*, Bilin[51]; *ŝaga*, Kwara[52]; *sugha*,

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[21] Caillaud: *op. cit.*, iii. p. 19.
[22] Wellsted, J. R.: *Travels in Arabia*, ii. p. 369.
[23] Hoepe in *Mitt. des Seminars für or. Spr.*, xxxi, Dritte Abt, p. 206.
[24] *Ibid.*, in *op. cit.*, xxxii, p. 23; Evans Pritchard in *Sudan Notes and Records*, xv, p. 49, and *cf.* p. 53.
[25] Evans Pritchard in *op. cit.*, p. 33.
[26] *Ibid.*, in *op. cit.*, p. 32.
[27] Westermann, D.: *The Shilluk People*, pp. li–liv. The information is derived from Bruce, *op. cit.*, iv, pp. 463 ff.; Caillaud, *op. cit.*, ii, pp. 255 ff.
[28] Westermann, D.: *op. cit.*, p. liv.
[29] Evans Pritchard in *op. cit.*, pp. 11, 29, 30, 52.
[30] Dillman: *Lex. Ling. Æthiopicæ*, col. 623; ṣ is pronounced like the Italian z. Hence the word is pronounced like *hazin*.
[31] Munzinger, J. A. W.: *Vocabulaire de la langue Tigré*, Leipzig, 1865, p. 10.
[32] Reinisch, L.: *Die Barea-Sprache*, p. 135; š=sh.
[33] Watson, C. M.: *Comparative Vocabularies of the Languages Spoken at Suakin*, S.P.C.K., 1888, p. 7.
[34] Reinisch, L., in *Sitzungsberichte Phil.-Hist. Classe, Kais. Ak. Wiss.*, Vienna, 1884, cvi, p. 333; ç=tch.
[35] Beke in *Proc. Philological Society*, 1845, ii, p. 101.
[36] Armbruster, C. H.: *Initia Amharica*, ii: *English-Amharic Vocabulary*, p. 152.
[37] Burton, R. F.: *First Footsteps in East Africa*, p. 556.
[38] Reinisch, L.: *Die Saho-Sprache*, ii, p. 89.
[39] Isenberg, C. W.: *A Small Vocabulary of the Dankali Language*, London, 1840, p. 5; Paulitschke, P.: *Ethnographie Nordost-Afrikas*, p. 234.
[40] Reinisch, L.: *Die Somali-Sprache*, ii, p. 90.
[41] *Ibid.*, in *Sitzungsberichte*, Vienna, 1888, cxvi, pp. 274, 339; Bieber, F. J.: *Kaffa*, i, pp. 399, 412.
[42] Beke, *l.c.* [43] *Ibid.*, *l.c.*
[44] *Ibid.*, *l.c.* [45] *Ibid.*, *l.c.*
[46] Krapf, J. L.: *Vocabulary of the Galla Language*, p. 19; Hobley in MAN, 1912, p. 20.
[47] Hobley, *l.c.* The Ariangulu are losing their own language in favour of Galla.
[48] Paulitschke, P.: *op. cit.*, p. 234 and note 422; p. 278.
[49] Reinisch, L., in *Sitzungsberichte*, Vienna, 1890, cxxii, pp. 28, 37.
[50] Salt, H.: *A Voyage to Abyssinia*, Appendix I, p. xxvi.
[51] Reinisch, L.: *Die Bilin-Sprache*, ii, p. 381.
[52] *Ibid.*, in *Sitzungsberichte*, Vienna, 1887, cxiv, p. 650.

Shangolla of Agaumider[52]; *ighari* (*shaga*), Falasha.[53]

Nilotic Languages: *ŋgɛ̈ä*, Shilluk[55]; *ɲiɛ̈ŋ* or *ɲiibng*, Jur[56]; *ŋgɔnyɔ̈*, Acholi[57]; *ŋgwɔŋɔ*, *ŋgingo*, Lur and Shuli[58]; *ŋgwɛŋgo*, *lela*, Lango[59]; *anyögulo*, Lotuko[60]; *rɛat*, Bari[61]; *agá*, Madi[62]; *nɛ̈d*, Dinka[63]; *yiɛth*, Nuer[64]; *gand*, Bongo (Dor).[65]

Nuba Languages of S. Kordofan: *ŋare*, Talodi; *ŋare*, Eliri; *ninuñali*, Lafofa; *karuso*, Tumtum.[66]

[52] Beke, *l.c.*
[53] *Ibid.*, *l.c.*
[55] Westermann, D.: *The Shilluk People*, p. 298.
[56] Schweinfurth, G.: *Linguistische Ergebnisse einer Reise nach Centralafrika*, p. 62, published as a Supplement to *Zeits. für Ethnologie*, iv, 1872.
[57] Crazzolara, J. P.: *Study of the Acooli Language*, p. 328.
[58] Emin Bey in *Zeitschr. f. Ethnologie*, xiv, pp. 160, 184.
[59] Driberg, J. H.: *The Lango*, pp. 291, 399.
[60] Emin Bey in *op. cit.*, p. 175.
[61] Mitterrutzner, J. C.: *Die Sprache der Bari in Central-Afrika*, Brixen, 1867, p. 236. Owen, R. C. R.: *Bari Grammar and Vocabulary*, p. 149.
[62] Emin Bey in *op. cit.*, p. 170.
[63] Mitterrutzner, J. C.: *Die Dinka-Sprache in Central Afrika*, Brixen, 1866, p. 301.
[64] Crazzolara, J. P.: *Outlines of Nuer Grammar*, p. 32.
[65] Schweinfurth, G.: *op. cit.*, p. 6. The Bongo are called Dor by the Dinka, p. 3.
[66] Seligmann, B. Z., in *Zeitschrift für Kolonialsprachen*, i, 1910–11, pp. 174, 175.

Fig. 1.—The greeting ceremony: a tribesman welcomes the visitors.

A GREETING CEREMONY IN THE ADEN PROTECTORATE. *By Major the Honourable R. A. B. Hamilton. Illustrated.*

44 Certain tribes of the Aden Protectorate, in particular the Aulaqis, perform a peculiar greeting ceremony called the *Môqab*. When visitors of importance approach a settlement, word of their coming is sent on ahead, and the men of the settlement turn out to receive them. They parade in a long line on some convenient piece of flat ground in front of their forts, with the leading men and important guests in the centre. On the appearance of the visitors a drum is usually beaten, and shots are exchanged in salute. The Bil Obeid consider it complimentary to shoot as close to the visitors as possible, but most of the tribes have the sense to fire straight up into the air.

When the visitors come near they dismount, form a line with the most important men in the centre, advance to a distance of about fifty yards from the 'home side,' and halt. They then load their rifles, adjust their garments, and wait for the ceremony to begin. The men of the 'home side' now spring forward, usually in couples holding hands, and, uttering war cries, form themselves into a long column, with the most important men in front. The column moves towards the visitors, but it is led in wheels and circles, so that at no time is it directly approaching them. If the principal men are not in front, it indicates that some at least are not disposed to give the visitors a very cordial welcome.

A tribesman now separates himself from the 'home side' and, very fast and in a loud voice, declaims verses which he has composed (fig. 1). If these are not accepted by his companions he declaims others, until acceptance is indicated by cries of 'Yallah.' He then begins to intone the first half of his verses in a chant peculiar to the occasion, and is followed by the leading half of the column. The second half of the verses is chanted by the second half of the column. When the poet is satisfied that the words are being sung correctly by all, he resumes his place in the column and joins in the singing. The column has meanwhile continued to wheel and circle (fig. 2).

The visitors can judge, from the words sung, whether their welcome is a hearty one, or not. These words are not always polite, and the greatest interest in them is displayed by the visitors, not only because they must soon reply in kind, but also because upon them may depend whether the visitors remain to feast and spend the night or whether, with unpleasant smiles and covert insults, they will move off to sleep elsewhere. On one occasion in Hâdhina the greeting song opened with the words—'It is only through 'our politeness that you have crossed the boun-'daries of Hâdhina.' These words, and a rapid count which showed that over half the 'home side' were in the forts, led to suspicion, and caused the visitors to extend their line until all semblance of ceremony was lost. But if the words are pleasant, an atmosphere of friendliness is quickly established. The men of the 'home side' eventually file past the principal visitors, often firing their rifles and 'salaaming,' and wheel back into their original line.

The visitors now go through the same procedure, until they too file past their principal hosts and reform their line. The principal men of the 'home side' now advance and are met in the centre, between the two lines, by the principal visitors. The two sides move in single file and greet each other, without speaking, by clasping right hands, raising them to face level, and giving them a good hearty sniff, half sniff and half kiss; the hands on meeting are slapped hard together. On no account is the thumb held, as by the Yemenis and Somalis; this is considered indecent.

The principal men of both sides now face each other, and the usual verbal greetings are given,

Fig. 2.—The 'home side' wheels and circles to the poet's chant.

but it is a hard and fast rule that no news shall be given. The sheikh and ten men may have been killed in a blood feud the day before, but the answer to the question: 'Any news?'—which is invariably asked—is always given in the formula —'There is no news, and nothing has been 'started, and nothing has been destroyed, and 'no one has said anything to anybody.'

This flat denial of news ends the ceremony. The visitors, if they are staying, hand over their rifles to their hosts, and are led by the left hand into the village, where they drink the bitter infusion of coffee-husk, flavoured with ginger. Conversation then becomes normal, and news is exchanged.

This greeting ceremony, as performed by the Aulaqi tribesmen, with its long and rather

monotonous chant, has considerable dignity, but as performed by the Qaranish, at a fast and ungainly run, it strikes one as laughable.

The most remarkable feature about the ceremony as a whole is the twisted path taken by the singers, for the more the leaders wheel and turn, the better it is considered. A hundred men or more in file, wheeling and circling in this way, present a very snake-like appearance, and such is admitted to be the intention, though no reason is given for it.

TAMIL PIONEERS OF CULTURAL ECOLOGY.

By G. Marin.

45 When Professor Geddes propounded his famous 'valley section' theory he probably little realized that he had been anticipated by a score of centuries or so by a school of Tamil students in Southern India. Their first findings are embodied in the work called the Tolkāppiam—the author of which is referred to as Tolkāppiar.

This work classifies geographical environments into four categories called *nilam*. These are:

(1) *kuṟiñji*, the mountains clad with forests, where the chief of man's occupations are the hunt, the gathering of honey and of edible roots, and some cultivation of mountain rice in the valley clearings. The divinity who rules here is Skanda (the tamil Murugan), the god of warfare.

(2) *mullai*, the foothills covered with open jungle, where man's main occupation is the tending of cattle and sheep, with a little cultivation of millet. Here the main deity is the pastoral god Kṛṣṇa (the tamil Māyōn).

(3) *marudam*, the fertile plains, where the chief pursuit is agriculture, and where the favourite deity is Indra (the tamil Vēndan), the bringer of rain.

(4) *neydal*, the coastlands, where the foremost of man's occupations are fishing and the manufacture of salt; this region is naturally presided over by Varūṇan, the god of the ocean.

To these four *nilam* was later added:

(5) *pālai*, the deserts, with hunting and plundering as cardinal occupations, and with Durga as the main deity.

For each *nilam* the Tolkāppiam mentions eight *kurupporuḷ* (from *karu* = 'embryo,' and *poruḷ* = 'thing'), i.e. groups of beings and things which are peculiar to it. Later the number of these *kurupporuḷ* was brought up to fourteen, as follows: [the later additions are between brackets.]

1. [the waters, namely: (1) springs; (2) jungle rivers; (3) wells, tanks, and rivers; (4) sea;]
2. [the flowers and plants;]
3. the trees;
4. the birds;
5. the mammals;
6. [the human inhabitants;]
7. the occupations;
8. the food;
9. [the type of villages;]
10. the drums;
11. the stringed instruments;
12. [the melodies;]
13. [the chiefs;]
14. the ruling divinity.

Such as they are described, the four original *nilam* must offer a good picture of what a traveller would have witnessed on crossing the Tamil country from west to east. Besides this, I am told that Tolkāppiar's Tamil contains less than 1 per cent. of Sanskrit words. So I am rather inclined to believe—until contrary evidence is produced—that this remarkable ecological system is of Tamil origin.

ROYAL ANTHROPOLOGICAL INSTITUTE: PROCEEDINGS

46 **Race Relations in English Society. Preliminary Report on a Community Survey.** *Summary of a Communication by Dr. K. L. Little, University Museum of Ethnology, Cambridge; 24 February,* 1942.

A 'coloured' community, composed in the main of West African, West Indian, and Arab seamen, their 'white' wives, and half-caste children, lives in the Bute Town district of Cardiff, close to the docks. The number of the men has been estimated at some 3,000, and of the half-castes as some 370. In the community, whose geographical separation from the rest of the town is reinforced both concretely and psychologically by the implications of

the Colour Bar, it is possible to distinguish sociologically a number of major segments. These are: (*a*) the African, composed basically of the older men, and drawn from Sierra Leone, the Gold Coast, etc., and the West Indies. It is markedly 'African'-conscious, and zealous for the good name of Africa. (*b*) The Moslems: this is also male in content. The bulk of its members come from Aden, and there are further Somalis, Egyptians, Malays, etc. This group is essentially religious rather than political in nature, and linguistic obstacles are partly responsible for its more limited contact with the rest of the community. (*c*) The 'Cosmopolitan'; this is the largest and most difficult group to designate. It comprises men drawn from all races, and attains coherence and cohesion through the Colonial Defence League, which is the largest and most significant 'coloured' association. (*d*) The half-castes. This comprises the younger people, mainly of Anglo-Negroid origin, of both sexes. The group as a whole is highly conscious of its own 'peculiar' social and racial position. (*e*) The married womenfolk. Some 80 per cent. of these are white, and the remainder is mostly half-caste. Like the men, the majority of this group are immigrants into the district, and, although it is impossible to generalize, many of them are reputed to emanate from the 'depraved' class. Diagrammatically speaking, this group provides the connecting line between all the segments defined above.

In terms of general relations, both within the community and with the outside world, there can be little doubt that the major sociological factors devolve from the implications in English society of 'colour,' and appear here to have brought about a number of clearly discernible effects. Up to the present, the marital opportunities and social contacts of the coloured men have been restricted almost entirely to women of 'poor' class. In respect both of education and occupational opportunity, the chances of the half-caste offspring have so far been extremely meagre. The cost of living in the district appears to be high, in at least one respect, owing to the relatively very high rents charged. The implications of colour prejudice are present even within the community, but in general terms the outside 'bar' produces primarily a reaction of resentment, which in turn brings into being a fairly definite sense of group-consciousness, and even of communal responsibility. With some qualification, it is through this that the community, as constituted, can be spoken of as sharing a common body of experience, for as a whole it is as yet too diverse, in terms of race, language, religion, and of culture, to lay claim to any communal body of interest.

Excavations at Ras Shamra in North Syria.

47 *Summary of a Communication by Commander C. F. A. Schaeffer, F.N.F.L., 1 April,* 1942.

Ten seasons of excavations ended with the last pre-war campaign at Ras Shamra, the North Syrian Canaanite Bronze Age town, and capital of the Kingdom of Ugarit.

Often mentioned in Egyptian, Babylonian, and Hittite records of the second thousand years B.C., Ugarit, thanks to its favourable geographical position at the meeting point of the Egyptian, Minoian, Mycenean, Babylonian, and Anatolian civilizations, became, as far back as the end of the third millennium B.C., an important trade centre of the Ancient East. Possessing the best natural harbour in Northern Syria, and facing Cyprus, Ugarit was in a position to control the then vital copper trade radiating from that island.

At the same time, as the rich and astonishingly varied finds at Ras Shamra have shown, Ugarit harboured very highly developed industries and art, excelling in ivory carvings, glazed figurines, bronze casting, gold-work, jewellery, and sculpture. In the wealthy temples of the city, learned priests maintained a school where novices were trained to read and write, on large clay tablets, religious hymns and mythical legends. They became expert in writing at least three different kinds of cuneiform script—the then already classic Sumerian, Babylonian, and a hitherto unknown alphabetical cuneiform, peculiar to Ugarit, and probably invented there, which is the oldest alphabet at present known, and goes back to the end of the fifteenth century B.C.

The cuneiform texts found at Ras Shamra revealed the Canaanite mythology and its highly developed sacred literature, which were the chief sources drawn on by the authors of the Old Testament, and hence are of exceptional interest for Biblical studies.

After these already rich results, two important discoveries were made in the course of the last season's work, which lasted from autumn, 1938, to the spring of 1939, when it was interrupted by the approach of war.

The two chief discoveries were (1) that of the royal palace protected by an important defence work with square towers of massive masonry and sloping glacis with heavy stone casing; (2) that of the royal archives which, in a centre politically so important as Ugarit, promise a rich historical harvest.

Built in the N.E. region of the huge artificial mound or *tell* of Ras Shamra, the palace was surrounded by the residences of the court officials, one of whom was military governor of Ugarit, and himself a royal prince, son of the King of Beyrouth. Besides the arsenal with stocks of bronze weapons, including a fine gold-incrusted battle-axe with an iron blade, of the end of the fifteenth century B.C., the governor's residence was found to contain several cuneiform inscriptions. One of these is a muster roll of the army of Ugarit, naming the officers and men, as well as the number of slings and bows delivered to them.

The remains of the palace fortress, revealing an astonishingly developed military architecture, show evidence of a partial dismantling followed by a restoration in the early fourteenth century B.C., and of final destruction at the beginning of the twelfth century B.C. Thus Ugarit of the Canaanite Bronze Age fell at the hands of the northern and sea-borne invaders who likewise destroyed Homeric Troy.

The resemblance of the architectural detail of the Ugarit fortress to that of the fortifications of Priam's city, as revealed by Schliemann's diggings, is indeed striking.

But the crowning success of the last season was the discovery of the royal archives housed in several rooms in a wing of the palace. More than sixty texts were unearthed before the excavations had to be suspended. Among them are several important economic documents of the Ugarit Empire, geographical lists as well as private and official letters in the royal correspondence. One of the latter was addressed by the Ugaritic King Niknmed to Suppiluliuma, the famous Hittite monarch contemporary with Amenophis III and IV of Egypt.

This document established beyond doubt the date in the early fourteenth or late fifteenth century B.C. of the now well-known religious texts of Ras Shamra, written in alphabetic cuneiform during the reign of Niknmed.

First established by archaeological evidence, their dating was questioned by various scholars reluctant to admit the existence at such an early stage of an already so highly developed alphabetical script. Moreover, the Ras Shamra mythological and religious texts compelled the abandoning of the view held by the Wellhausen school of modern exegetics, according to which the patriarchal stories of the Old Testament were a mere collection of oral traditions of doubtful historical value, arbitrarily brought together by authors of the ninth and thirteenth centuries B.C. This view was based on the assumption that the Canaanite civilization had been devoid of any written documents, an assumption now proved false by the Canaanite texts of Ras Shamra.

These texts prove that the great religious and moral progress achieved at the time and under the leadership of the Prophets, had actually started centuries earlier among the Canaanites, whose civilization formed the substratum which fed the roots of the culture of Israel, a substratum unknown until it was revealed by the Ras Shamra discoveries.

Owing to present circumstances, the publication of the new texts and the other new discoveries must be postponed until the literary as well as the archaeological activities of the Ras Shamra expedition can be resumed.

PROCEEDINGS OF SOCIETIES AND INSTITUTIONS

Copenhagen: Centenary of the Ethnographical Collection: October, 1941.

48 In the last week of October, 1941, the world-renowned Ethnographical Collection celebrated the hundredth anniversary of its foundation. Its early start, with the amalgamation of the Dutch collection at Gottorp with the Royal Cabinet in Copenhagen, both rich in early specimens, was maintained by a succession of distinguished and energetic directors, the latest of whom, Professor Thomas Thomsen, carried through the transference of the whole museum to the present extension of the Crown Prince's palace, which now holds only the great archaeological series which grew up beside it. In wartime it was not possible to invite foreign guests, except from certain neighbouring and neutral countries, but the congratulations of foreign colleagues are none the less hearty and sincere.

It is grievous news that, having lived to prepare and enjoy this celebration with his customary zeal and personal charm, Professor Thomas Thomsen died after a short illness in December, 1941.

The Australian Anthropological Association.

49 In a letter dated 29 November, 1941, the President, Professor A. P. Elkin, and the Honorary Secretary and Treasurer, Mr. G. W. Watkins, have announced to the Royal Anthropological Institute the establishment of the Australian Anthropological Association, with the following account of its character and its objects :—

The Australian Anthropological Association was formally constituted in 1939, at a meeting which coincided with the Canberra meeting of the Australian and New Zealand Association for the Advancement of Science. For some time the Anthropological Societies of New South Wales, Victoria, and South Australia had been considering the establishment of a National Anthropological Association, and it was arranged to send delegates to the Canberra meeting of the A.N.Z.A.A.S., with power to draw up a constitution and form a Federal body.

As stated above, the Australian Anthropological Association was established in 1939, and under its constitution the headquarters are located in rotation for a period of two years in each State of the Commonwealth in which there is an Anthropological Society affiliated with the Association. For the first two years of its existence the headquarters of the Association were located in Adelaide, South Australia. In accordance with the constitution, this control is now vested in the Council of the Anthropological Society of New South Wales, and will remain in Sydney until 1 October, 1943, when a transfer to Melbourne, Victoria, will be made.

The objects of the Australian Anthropological Association are :—

(a) To promote the science of Anthropology.
(b) To hold biennial conferences of delegates from affiliated societies to deal with matters affecting such societies generally or the science of Anthropology.
(c) To take public and official action in the interests of Anthropology, as may be deemed desirable.
(d) To encourage affiliated societies to co-operate in every possible way.

The accepted medium for the publication of members' work is MANKIND, the official journal of the Anthropological Societies of Australia.

The present Council of Management of the Australian Anthropological Association is as follows:—

President: Professor A. P. Elkin, M.A., Ph.D., F.R.A.I.

Vice-President: Mr. F. L. S. Bell, M.A., F.R.A.I.

Honorary Secretary and Treasurer: Mr. G. W. Watkins ('Hansard' Staff, Parliament House, Sydney, N.S.W.).

Council: Mrs. F. D. McCarthy, M.A., Dip. Ed.; Mr. C. H. Palmer, B.Sc., B.D.S.; Mr. H. J. Wright, A.M.I.E.; Mr. W. J. Walton; Mr. G. P. Whitley, F.R.Z.S.; Mr. E. H. Wright; Mr. F. D. McCarthy, Dip. Anthr. (Syd.).

The above facts have been placed before you with the object of acquainting your Council with the presence in Australia of an organized body of trained anthropologists and of lay folk interested in the science of man.

This Association is capable of acting in an advisory capacity in all matters relating to Australian anthropology, and should your Institute at any time require information or advice coming within the objects of the Australian Anthropological Association we shall be glad to co-operate to the fullest extent of our powers.

The Institute welcomes most heartily this new provision for anthropological studies, and wishes the Association the success which it deserves. With equal cordiality MAN greets MANKIND.

The Council on Human Relations.

50 The Council on Human Relations is devoted to the study of all those cultural factors—institutions, habits, and character—which, differing profoundly from one nation to another, are relevant to international cooperation.

The Council makes the following assumptions:

A. That any plan for post-war reconstruction and later world-wide cooperation must recognize the validity of different and contrasting civilizations, each of which has developed its own unique and valuable ways of life, its own concepts of order, and its own ways of seeking order.

B. That any plan which is based upon the notion that some one set of cultural ideas should dominate the world is provincial, and doomed to eventual failure. Such a plan would inevitably fail to provide any positive role for the other great civilizations of the world, and would therefore fail to enlist the members of these other civilizations in world co-operation. No plan which conceives of the Atlantic Basin as the hub of civilization and regards the rest of the world as permanently "backward," or as "colonies," has the sort of base within which the peoples of Africa and Asia can be integrated.

C. That scientific knowledge and scientific insight will be necessary in the drawing up of any plan for world cooperation. Such a plan must be conceived on lines which transcend the limitations and cultural assumptions of any one people, and the scientific approach to human relations is the only one which seriously attempts such a width of vision.

The Council on Human Relations is interested in furthering collaboration among all students of personality and culture whose collected materials, current researches, and projects of research may be useful for a scientific approach to problems of international relations. In particular, the Council is interested in the immediate problems of cooperation among the allied nations and the future problems of world reorganization, when the cooperation of all nations will be necessary.

The Council is requesting the following information:—

1. Names of persons who are:
   (*a*) carrying on such researches.
   (*b*) have carried on such researches.
   (*c*) have raw materials or facilities for such researches.
2. Descriptions of bodies of collected materials which are relevant to the personality and culture problem, especially in the major contemporary cultures of the world, both occidental and oriental, such as:
   (*a*) Collections of autobiographies.
   (*b*) Case histories, personality studies, and systematic observations on individuals or groups of individuals.
   (*c*) Results of psychological testing applied to members of different cultures in a standardized way.
   (*d*) Comparable bodies of data on any aspect of contemporary culture, especially bodies of data which have been comparably collected from more than one such culture, *e.g.* collections of advertising symbols, legal practices and their implications, artistic forms, philosophical systems, etc., that may illuminate cultural emphases and the differences between the various cultures.
   (*e*) Collected data on family patterns and relations and on child rearing and development.
   (*f*) Collected material on the behaviour of minority groups in the United States, which may throw light on the cultures of origin of these groups and on the conditions under which members of these groups are able to live and work with members of other cultures.
3. Information about all proposals for current cooperation and post-war planning which explicitly recognize that members of different cultures have been reared under different sets of institutions, have different personality structures, and diverse ways of seeking social order.
4. Information about new techniques or new applications of existing techniques to the problem of cross-cultural differences in personality and character.

The Council hopes to serve as a clearing-house for research in this broad field, by putting those who are interested in working on the same culture in touch with each other, and those who are working with comparable techniques, but on different cul-

tures, in touch with each other. The Council also proposes to circulate among its collaborators abstracts and bibliographies on these subjects.

The Secretary of the Council is Dr. Gregory Bateson, and its address is 15 West 77th Street, New York City.

OBITUARY

John George McKay, 1859-1942.

51 Born at Knighton in Leicestershire, removed to London when about five years old, educated in London, employed by the Bank of England, buried at Budleigh Salterton in Devon; such a sketch of J. G. McKay's life sounds far removed from the kilt and the claymore. But it omits all the essential facts. The Clan McKay holds stoutly together, and this member of it was a devotee of, almost a fanatic for, everything Gaelic. He won his way to a good working knowledge of Highland speech, and spent as much time as he could in the Highlands, talking to the people of the land, and gathering from them every scrap of their lore he could find, or they remember. Like many enthusiastic amateurs, to whom anthropology and folklore owe much, he was not always very sound in his interpretation of what he heard and read; the writer of this notice found it well to avoid the subject of deer-goddesses when talking to him. But a man has a right to his theories, be they good or bad, if he will but accumulate new or neglected facts, and this McKay did with exemplary diligence. The unpublished remains of J. G. Campbell (Iain og Ile) are preserved in Edinburgh and include a number of Gaelic folk-tales and other documents for which Campbell himself found no room in his books. These McKay pounced upon, transcribed them in a large hand, as legible as any print, and added English translations of the original, rendering closely but idiomatically what Campbell's informants had dictated to him. He further wrote lengthy notes, full of facts and speculations. It remained to find some means of publishing what he had written, and to do so with all speed, for he clearly foresaw that war would come to interrupt peaceful and civilized occupations such as his. Only a rich man could have contemplated bringing out such a bulky work at his own expense. The interest of the Scottish Anthropological and Folklore Society was aroused, some funds gathered, and nearly a year after war had been declared, in 1940, the first volume saw the light (Oliver and Boyd, Edinburgh), part of the editorial work being done by members of the Society and some marginal annotations contributed by Professor Stith Thompson. More material is ready or nearly ready, and may appear when the European and Asiatic gangsters cease to trouble honest men.

H. J. ROSE.

REVIEWS

NORTH AMERICA

Environment and Native Subsistence Economies in the Great Central Plains.

52 *By Waldo R. Wedel. Smithsonian Miscell. Collections, Vol. 101, No. 3. Washington D.C., 1941. 30 pp., with 5 plates.*

This is a methodical comparison of climate, soils, archaeological evidence, and historical records of Red-skin settlements and movements, in the States of Kansas and Nebraska; stimulated by recent disastrous failure of white-man's agriculture, through drought and soil-erosion.

The prehistoric settlements carry back the perspective some eight or ten centuries, and indicate shorter or longer periods of deficient rainfall, some of sufficient duration to depopulate the western plains for a while. What is interesting is the discovery of agricultural settlements anterior to the hunting régime which, intensified by the introduction of European horses and fire-arms, dominated the region in the early days of white penetration. It would further appear that alternate settlement and abandonment was characteristic of primitive man's occupation, as it has been of white man's tenure in the absence of large-scale aid from the Government.

Some of the photographs are of early date—as far back as 1870-71, and show hunting camps and earth-lodge villages, very little disorganized. J. L. M.

Peachtree Mound and Village Site, Cherokee County, North Carolina.

53 *By Frank M. Setzler and Jesse D. Jennings. Appendix: Skeletal Remains. By T. D. Stewart. Smithsonian Institution: Bur. Amer. Ethnology, Bulletin 131. Washington, 1941. 103 pp., with 50 plates. Price 40 cents.*

This report is due to the collaboration of the Civil Works Administration with the Smithsonian Institution for relief of unemployment by archaeological research, and is a good example of the results obtained under this scheme.

The Peachtree Mound is a homogeneous site from 1831 back to pre-European times. It appears to be the town of Gussil visited by Hernando De Soto in 1540, and later certainly in Cherokee occupation. It is therefore important material for a history of Cherokee culture. It passed through three main periods of construction, upon a village site, and contains traces of various constructions of timber. Around it lay the village with other timber constructions, many post-holes, and a series of burials. Many aspects of Cherokee life, therefore, are illustrated and described, and some account given of Cherokee physical types.

J. L. M.

CORRESPONDENCE

Sexual Inhibition in the Negro. *Illustrated.*

54 SIR,—The following appears to be of interest. It is the only instance I have met in twenty-six years work among the Negroes of South Eastern Nigeria.

Nuptial sexual incompetence in the young adult European male is not infrequent and is reported in text books on sex psychology. This incompetence, where reasons are given, is attributed to the effects of inhibitions and to bashfulness imposed by modern civilization and by the early and continuous segregation of the sexes. It came as a surprise to find similar states among a people living under more natural conditions.

In the north of the large Administrative Division of Bamenda, British Cameroons, West Africa, with an area of approximately 7,000 square miles, are the remnants of tribes which, scattered by Fulani raids, have fled to the mountain fortresses of the Donga valley. These raids ended only at the beginning of this century. The northern area is very inaccessible and very difficult to travel in. The inhabitants have but little contact with the outside world. In order to pay their tax they speak of buying the money with fowls for, except for tax, money is not used; all trading is conducted by barter.

Work on tribal boundaries recently took me into this very inaccessible region. There I spent one day in the village of Nkot, Mfumte Native Court area, perched on the top of a tree-clad mount. Only once before had a European Administrative Officer visited the place. The men wear a small strip of cloth covering the genitals and the women nothing. Houses are well built and large. Occupations are farming, preparation of palm oil, and hunting.

At the Chief's compound I found the following sites:

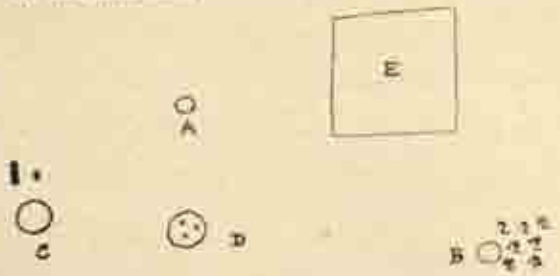

FIG. 1.—NKOT VILLAGE: CHIEF'S COMPOUND (E) AND ADJACENT SITES DESCRIBED BELOW.

A consisted of a collection of stones including broken stone pestles for pounding *cam*-wood. This site marked the spot where fertility rites were performed for the increase of livestock. If goats, sheep, dogs, or fowls did not produce off-spring they were brought to 'A,' an offering made, a decoction brewed, and the sterile animal washed with water with some of the brew in it.

B was a paved platform of stones with various shrubs, plants, and trees growing there. Its ancient use was forgotten. Its present use was merely as a place to sit in the evenings.

C consisted of two small upright monoliths with a collection of small stones scattered around them and at their base a lump of greyish clay. Growing there were *sessivera* plants. These monoliths have been placed there by 'the ancients,' but what they signified now was also forgotten. However, some ritual functions still clung to the stones. When the village held a dance, a libation of palm wine was poured between the monoliths and the dancers dipped their fingers in the out-poured wine, rubbed them on the lump of clay, and marked patterns on their bodies. Leaves of the *sessivera* cut from this site were held in the hand while dancing.

D was the most interesting. It consisted of a circle of small stones with three large ones in the centre. The place was a special male fertility site. Here, if a man married to a maid was unable to consummate his marriage, was performed the 'freeing ceremony.' Within the circle and before the three stones a sacrifice of a fowl brought by him was made, prayers were offered, and the man standing naked was publicly washed with water. Thereafter he would go immediately and have connexion with his wife.

I thought at first that it was a magical means to overcome the impotence of age, but I was assured that its use was for young men: that this sexual incompetence in young male adults was due to magic: that if a man touched a certain plant or its fruit, or passed over it when laid in his path, he would be seized with sexual incompetence and that until he was washed at site 'D' he might remain incompetent for as long as six months.

It seems that the Negro is here dealing with an erotic neurosis supposed by the perquisite of the sex-repressed European.

I also gathered the following information. They have an eight-day week:

R. Kŏki	W. Lii	R.=Rest day
M. Ntangan	W. Nkabis	W.=Working day
W. Ntaia	R. Yii	M.=Town market day
R. Sig	W. Ndut	

The most important was Kŏki, pronounced *Koki*. They claimed to have their own language not shared with any other peoples, but there was insufficient time to make any linguistic investigations. The reigning chief selected his successor from his sons where, before a meeting of the elders, he would place his buffalo drinking-horn in a son's hands. The choice is kept secret from the populace and from the rest of the sons.

After the funeral rites of the dead chief are over the sons are paraded before the assembled village, whereupon the priest of the main protective shrine of the village, filling his mouth with palm wine blows it over the chest of the chief designate. This sign was followed by the populace soundly thrashing the future chief with *sessivera* leaves plucked from site 'C.' Earth was rubbed over his body until he consented to take up the vacant post and became the new Chief. The 'scourging of the King' to which I have previously drawn attention in *Africa*, Vol. IX, No. 3, p. 403, as forming part of the original coronation ceremony and which occurs in the mock ceremony at the crucifixion of Christ, is the common practice in most of the Bamenda Division.

The Chief-to-be was then taken within the old chief's compound washed with water and rubbed over with *cam*-wood, thus making his whole body red. On the ground was spread a leopard skin whereon was placed a wooden stool whose borders were decorated with the cowry shell design and the new chief placed on this stool. Four times he was lifted off and four times placed on it. He was then taken out and presented to his people as their new chief. Before them he proceeded to dance amid their applause and rejoicings. Offerings of food were made to him, but not in fours or in multiples

of four, nor were the offerings raised or lowered four times before being handed over, as occasionally occurs.

No stone seat, as might be expected, was used in the coronation.

M. D. W. JEFFREYS.

Comments on 'The Pictographic Art of the Ancient Maori in New Zealand.' *Cf.* MAN, 1941, 61.

55 Mr. Fell's article (MAN, 1941, 61) should not, I think, be allowed to pass without remark. It refers to sundry devices found on the walls of shallow caves which Mr. Fell suggests are not only of Maori origin, but also provide conclusive evidence that pictographs formed a definite branch of Maori art 'in pre-historic times.' It was, perhaps, natural that these drawings should remind Mr. Fell of the demonstrably prehistoric cave-art of Europe. He says that, 'At the time when the white man began to settle in New Zealand, about one hundred years ago, the Maoris were in a stage of culture which was essentially neo-lithic.' He is, unfortunately, not the first to so apply this term, relying solely on the single fact that the Maoris of that period used stone-bladed tools. That the highly complex Maori culture of that period, or at any time subsequent to their arrival in New Zealand, was materially comparable to that of neolithic man is very unlikely. His next statement that, 'Maori art was closely related to religion,' though it gives a slight colour to the comparison, is too debatable to be dealt with in so brief a sentence. In saying that, 'pictographic art occupied but little of the Maori's artistic endeavour,' Mr. Fell begs the two main questions arising from the subject, namely: (1) are these drawings in fact of Maori origin? and (2) do they prove that pictography was ever an established form of Maori art? To these must be added a third as to their possible age. It is, I imagine, because the evidence provides no answers to these questions, that leading New Zealand ethnologists have been discouraged from devoting much time to the subject. Beyond stating that 'From time to time . . . odd examples of pictographs have come to light,' Mr. Fell does not tell us whether others besides those he deals with have been discovered or, if so, of what nature, and his selection, as illustration, of 'typical' or 'some of the better examples' is, not reassuring. For example, one of his categories of the evidence, namely, 'purely conventional designs, similar to the motives employed in carving and other decorative art,' which he tells us are 'numerous,' he dismisses as 'not of great interest,' though they may quite possibly have no little bearing on both age and authorship.

For his justification of the term 'prehistoric' Mr. Fell relies entirely on the Blackler's Cave painting, which he describes as 'representing a prehistoric moa hunt, as seen by a contemporary artist.'

'Undoubtedly,' he asserts, 'it represents a prehistoric hunting scene . . . comparable in vigour with the paintings of the Capsian peoples of south-eastern Spain. There are four human figures which are pursuing one of the smaller moas.' That the bird is indeed a moa of any species is scarcely an observable fact. Though it is, of course, possible that the painter intended to depict a moa hunt, that the group is in any sense 'prehistoric,' because the moa is extinct, is by no means certain. There is, I understand, good reason for believing that the moa survived in the South Island until comparatively recent times. Finally, there is no objective reason for assuming that this painting was made by a Maori. Anyone, brown or white, not a practised draughtsman, *might* have done it, for casual amusement, and at a comparatively recent date.

I quite fail to see in what respect fig. 16 helps Mr. Fell's argument. It is quite probable that it does represent the old legend of The Fishing of Maui. As he himself rightly remarks, it 'was probably executed 'after the arrival of the missionaries,' but one would much like to know what he means, exactly, by adding, 'but that does not necessarily imply European influence.' Is this, perchance, a somewhat venturesome application of the doctrine of survival?

W. PAGE-ROWE.

Magic and the Unconscious. *Cf.* MAN, 1941, 102.

56 SIR,—In MAN, 1941, 102, Lord Raglan asks certain questions. This is my answer:

1. One of the patients was rubbing the palms of his hands together, and declared that by doing so he could make plants, babies, and animals grow.
2. The second was moving his head forward and backward, and said he did this to hasten or to retard the motion of the sun.
3. No leading questions were asked; the information was given by the patients to the attendants and to the senior physician, Dr. Hollós.
4. No such rites are practised in Hungary. (For Hungarian folklore, compare my book *Magyar Néphit és Népszokások* (Hungarian Folk-Belief and Customs), 1925.
5. The patients were peasants; neither of them was even remotely in a position to have heard about ethnography.

I hope I shall find time to write a short paper on this topic for MAN—out of courtesy to Lord Raglan. Meanwhile, I have studied schizophrenia for two years at the Worcester State Hospital and I can assure Lord Raglan that in this psychosis we regularly see individuals, who had never heard about these things before, thinking and acting in a magical or pre-logical way.

GÉZA RÓHEIM.

1, W. 85th St., New York City.

'Pre-urban' Modes of Life.

57 SIR,—Writers on anthropological subjects have always found some difficulty about a suitable epithet for tribes or peoples who cannot be called 'civilized,' but to whom the word 'uncivilized,' with its modern specialized sense, is inappropriate. 'Savage,' the 'man of the woods' (*silvaticus*), is etymologically correct, but to-day carries a narrowed meaning of 'cruel' which is often unsuitable; 'unlettered' goes too far, while 'preliterate,' which means the same thing with greater precision, is too unusual for common service. 'Primitive' seems to be in most general use, but begs the question; for, we may ask, at what point of evolution does 'primitive' man begin his career, and when does he cease to be 'primitive'?—not to mention the usual objection that people apparently primitive may in fact be regressive and that the most primitive-seeming peoples, such as the Veddas or Andamanese, have behind them countless generations of development, however remote their present status from our modern civilization.

Taking as a sign-post Gordon Childe's *Man makes Himself*—an admirable first guide for the uninstructed—I would propose the word 'pre-urban,' the reference being to his 'Second Revolution'—urbanism—when man became 'civilized,' that is, a *civis*, or proper unit of a city, an occupant of a region where cities had been made possible by the organization of agriculture and the invention of the plough; where also the man of 'civilized' manners towards his fellows is called 'urbane.'

G. D. HORNBLOWER.

A PAIR OF DRUMS, WITH WOODEN FIGURES, FROM BASTAR STATE, INDIA

From a photograph by W. F. Berks, of Bombay

MAN

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ORIGINAL ARTICLES

A PAIR OF DRUMS, WITH WOODEN FIGURES, FROM BASTAR STATE, INDIA.

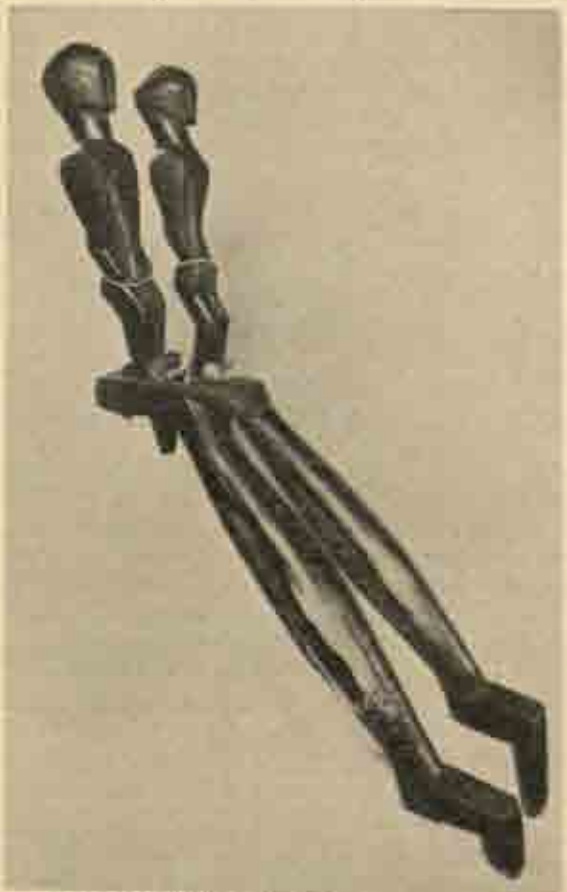
By Verrier Elwin, Jagdalpur, Bastar State, India.

With Plate E.

58 The two figures illustrated in Plate E are attached to a pair of wooden drums or gongs. They are from Alor village in the Kondagaon Tehsil, Bastar State, India.

Each drum is a single piece of wood hollowed out in the middle, with a carved beak at one end and at the other a flat strip with a hole in the centre. Into this slot there fits a 4-inch peg projecting from a small support on which stands the wooden figure. Through the peg there is a small hole to take a wooden pin which fixes the figure firmly in position.

The figures are male and female. The male is slightly taller, standing 15¼ inches from the base. The female is ¼ inch shorter. The two figures are differentiated by the shape of the genital organs and by small breasts in the female and a lozenge-shaped pattern on her body, probably intended to represent the womb. The hair is roughly indicated by carved lines and is different in the two images. The man has the five fingers of each hand carved on either side of his thighs where he is supposed to be holding his hands. This feature is absent in the female image. The male rectum is shown, but not the female. The entire length of each of the drums is 2 feet 6½ inches from end to end. The slot in the middle is 10½ inches long, ¾ inch broad, and 2 inches deep.



A PAIR OF DRUMS FROM BASTAR STATE, INDIA

These drums or gongs are carried over the shoulder and beaten with small bamboo sticks. The specimens in my possession were made by the Murias of the northern plateau of Bastar. The Murias of this area have a highly developed dormitory system and the boys and girls of these dormitories are expert dancers. Once a year the boys go out on long dancing expeditions; they travel from village to village and are entertained by the girls of the dormitories they visit. On these dancing tours, which are of a ceremonial nature and usually performed in honour of Lingo Pen, the boys often take elaborate toys and drums, and dress themselves with special garments. The drums illustrated here are the only ones I have seen in Bastar, and indeed I have not seen anything like them anywhere else in Central India. The male and female figures are said to represent a *chelik* and *motiari*—boy and girl members of the dormitory.

PREHISTORY IN THE U.S.S.R. I. PALÆOLITHIC AND MESOLITHIC. A. CAUCASUS AND CRIMEA.

By Professor V. Gordon Childe, F.S.A., University of Edinburgh.

59 The oldest remains of 'man' in south-eastern Europe have been found in the mountains of the Caucasus, the Crimea, and the Balkans. For here caves offered natural shelters such as were lacking on the Russian plain which is exposed to the full force of Polar blasts without even a belt of forest interposed between tundra and steppe during the Ice Ages. Partly for the same reason cultural development in this mountainous zone diverged from that revealed on the plain in early post-glacial times too. Particularly from various Crimean caves, Bonch-Osmolovskiĭ and others have described a sequence of cultures that agrees remarkably with that recognized in the Palestinian caves of Mt. Carmel.

The earliest relics are derived from the lower of two horizons in the cave of Kiik-koba, and consist of very crude flake-implements of Tayacian type, comparable to those from level G at Et-Tabun (*TINQA*, 132–44; Hančar, *Urgeschichte Kaukasiens*, 36–50; Bonch-Osmolovskiĭ, *Grot Kiik-koba: Paleolit Kryma*, I, *Akademiya Nauk*, 1940—not available in Britain). Though specialized stone weapons are absent, the cave-dwellers hunted red and giant deer, wild horse, wild ass, wild pig, bison, saiga, wolf, fox, hare and steppe rodents. This assemblage, as well as the ashes of thorn-bush and juniper, argues a temperate climate, presumably that of the last interglacial. The 'men' were certainly Neanderthaloid, though details are not available here.

ABBREVIATIONS

IGAIMK=*Izvestiya Gosud. Akad. Istorii Materialnoĭ Kultury* (Leningrad).
KS=*Kratkie Soobsheniya o dokladakh i polevykh issledovaniyakh*; Institute Istorii Materialnoĭ Kultury (IIMK), Akademiya Nauk.
PGAIMK=*Problemy Istorii Materialnoĭ Kultury* (Leningrad).
RAEh=*Russkiĭ Antropologicheskiĭ Zhurnal* (Moskva–Leningrad).
SA=*Sovietskaya Arkheologiya*, IIMK., Akademiya Nauk.
SE=*Sovietskaya Etnografiya*, Akademiya Nauk.
TAPS=*Transactions American Philosophical Society* (Philadelphia).
TINQA=*Transactions* of the II International Conference of the Association for the Study of the Quaternary Period in Europe, Fasc. V, 1935.
TSA=*Trudy Sektsii Arkheologii*, Rossk. Assotsiatsiya Nauchno-Issledovatelskikh Institutov Obshchestvennykh Nauk (Moskva).
Efimenko, *PO*=*Pervobytnoe Obshchestvo, Ocherki po Istorii Paleoliticheskogo Vremeni*, IIMK., 1938.
Hančar, *Urgeschichte Kaukasiens*, Vienna, 1937.

Near a hearth, Bonch-Osmolovskiĭ discovered the incomplete skeleton of an adult lying on its right side with the knees gently flexed in a grave 1·70 m. long by 0·55 m. wide, dug 0·30 m. into the rocky floor of the cave.[1]

The industry from the upper layer at Kiik-koba seems on the whole parallel to those from Chokurcha (*TINQA*, 187–211) and layer 7 at Volchiĭ Grot in the Crimea (*KS*, viii, 1940, 90–6) and from Ilskaya on the Kuban (*TINQA*, 213–24). Common to all these sites are bifacial points only 6 to 8 cm. long—a few in dolomite from Ilskaya measure 12 or even 15 cm.—that have been compared to Micoquian hand-axes, such as might occur in Et-Tabun, E. They are, however, associated with a large number of flake tools including points, trimmed on one face only, and side-scrapers; at Kiik-koba, out of 800 specimens, Bonch-Osmolovskiĭ reports only 13 per cent. *bifaces* as against 32 per cent. flake-points and 37 per cent. side-scrapers. From Ilskaya, Zamiatnin reports also a few gravers. From this site and from Chokurcha come rough bone points, while utilized bones—anvils or compressors—are encountered at all stations. The game now includes mammoth and woolly rhinoceros, cave bear and cave hyæna. This may be taken as indicative of the onset of colder conditions (perhaps the approach of the Würm glaciation), but might also be attributed to the use of spears tipped with stone points that could pierce rhinoceros-hide as the wooden spears of the Tayacian could not.

Layer 6 at Volchiĭ Grot contains a purer flake industry that is also found at Shaitan-koba (*TINQA*, 44–8). It is classed as Mousterian and comprises a pretty typical series of points and side-scrapers; from the figures and descriptions I cannot say whether these are made by the Levallois technique or not. From Shaitan-koba, Bonch-Osmolovskiĭ reports 'a nice series of gravers,' and Bader has since found such in Volchiĭ Grot, 6. Such are known from the Mousterian of France and from the Acheulean of Palestine, but they are distinctly rare in the Levalloiso-Mousterian (Et-Tabun, D B). The

[1] This is now assigned in the book to the upper layer, on grounds which the reviewer in *KS*, ix, 127, shows to be inadequate.

fauna now includes definitely glacial species such as the Arctic fox, while at Volchil Grot the mammoth seems to have been the principal object of the chase. A few Mousterian remains from the southern plain, from the river Derkul near its junction with the Donetz (*TINQA*, 84–7), Krasnyi Yar near Voroshilograd (Lugansk) and Kodak near Dniepropetrovsk (Efimenko, *PO*, 254) might be attributed to summer camps of hunters from the Crimea, but another explanation will be needed for the alleged Mousterian artefacts from the gravels of the middle terrace of the Chusov near Molotov in the northern Urals if the brief preliminary report (*KS*, iv, 1940, 42) be confirmed.

An industry of Upper Palæolithic facies first appears in the cave of Syuren in the Crimea (*TINQA*, 149–58); in the six metres of deposit, Bonch-Osmolovskii distinguished three horizons, which, however, are not separated by any sterile deposit. From the lowest layer the author insists upon the presence of 'some twenty side-scrapers and points of Mousterian aspect,' out of some 1,000 artefacts. For the rest the industry is throughout Aurignacian; core-scrapers are prominent, as well as the usual assemblage of blades, blade-scrapers and gravers. From the lower level a very few Châtelperron points are reported; from the middle, characteristic keeled scrapers and beaked gravers; from the upper, some backed blades of a Gravette aspect. The fauna is throughout 'cold' including for the first time reindeer, snow-hare, and Polar birds (white partridge, *Bubo lagopus* and *Otocaris alpestris*); so too is the flora (poplar, birch, willow and juniper). But woolly rhinoceros is missing and mammoth very rare indeed. Bonch-Osmolovskii suggests that their absence may be due to the early extinction of these pachyderms in the peninsula. But it may be that, thanks to improved equipment—missile weapons—the Syurenians were able to supply their wants without painfully dragging to their mountain fastnesses the heavy carcases of steppe beasts; Prof. Garrod points out that, in Central Europe too, mammoth is rare in Aurignacian caves.

In Transcaucasia, the cave of Khergulis Klde has yielded an assemblage comparable to Lower Syuren, Taro Klde to Middle and Devis-Khvreli, Virchov, and Mgvimevi to Upper. In the last named Zamiatnin (*SA*, iii, 1937, 57–76) has identified some amorphous engravings on the walls, which he compares to those in the Grotto of Romanelli. On all these sites heavy core-scrapers of Middle Aurignacian style, that Efimenko plausibly suggests were used in wood working, are prominent, but Zamiatnin has issued a timely warning against taking such archaic types as indicative of a high absolute antiquity: 'Mgvimevi should not be put earlier' in comparison with West European finds than 'early Magdalenian' (*SA*, iii, 74). In fact, in the Crimea as in Transcaucasia, the 'Syurenian' seems to be succeeded immediately by a meso-lithic 'Azilian' stage, associated with an almost recent fauna and geometric flints.

Soviet archæologists are disinclined to postulate an immigration of neanthropic stocks from some undefined cradle to explain the emergence of this Upper Palæolithic. Bonch-Osmolovskii, for instance, emphasizes the seclusion of the Crimean peninsula, and insists on anticipations of Upper Palæolithic types in the preceding Mousterian stage and on the survival of Mousterian forms in the lower layers at Syuren, noted by Zamiatnin also at Khergulis Klde and Taro Klde (*SE*, 1935, 2, 116). Even for the anatomical change from Neandertaloid to *Sapiens* types, Efimenko (*PO*, 281, 300, 433–5) has suggested an evolution conditioned by cultural progress. A small horde of lower or middle palæolithic hunters, owing to the imperfections of their equipment—especially absence of efficient missile weapons—would require an enormous territory to support them. Each little group would thus be isolated and virtually condemned to endogamy, and so to in-breeding, which would tend to conserve archaic traits, and (I would add) to prevent that mixing up of genes that seems favourable to mutations. With the invention of darts and fishing-tackle (the inhabitants of Syuren, for example, already caught fish) the chase became more productive; a smaller territory would support the little horde which would therefore be no longer necessarily isolated. Exogamy became possible; the archaic stabilized racial types would break down, and superior types could emerge—and that relatively quickly.

It is important in Great Britain to insist that there is nothing like the Solutrean culture in the Caucasus or Crimea (*SE*, 1935, 2, 118)—the easternmost true Solutrean remains come from Roumania (Stânça Ripiceni, *Dacia*, v/vi, 10) and Poland—still less a Magdalenian culture. The

next stage after the 'Aurignacian' in the Crimea and Transcaucasia is termed Azilian, indicating a stadial and probably also chronological parallelism with that culture in France, but nothing more. At Shan-koba, Bonch-Osmolovskiĭ (*TINQA*, 128, 158–68) distinguished two 'Azilian' levels, followed by a 'Tardenoisian' deposit. By the Azilian levels, the glacial fauna has vanished, though some quaternary species (*Felis spelaea, Cervus megaceros, Felis lynx, Castor fiber*) still survived, and the oak was not yet used as fuel, though the cave lies in the oak zone to-day.

In the flint industry the outstanding innovation in the Azilian, both in the lower layer at Shan-koba and in the more or less contemporary caves of Fatma-koba, Syuren II (*TINQA*, *l.c.*) and Murzak-koba (*SA*, v, 1940, 160–75) and perhaps also of Gvardzhilas Klde in Transcaucasia (Hančar, 148–50; *SE*, 1935, 2, 118; Efimenko, *PO*, 618, insists on the presence of small, roughly worked flint axes at the last-named site) is an abundance of geometric microliths—crescents and trapezes; in the lowest layer at Shan-koba this group is said to have formed 60 per cent. of the industry. In the middle layer and at Syuren II, geometric forms are said (*TINQA*, 161; but *cf. SA*, v, 299) to be less common, while small 'willow leaves' in Sviderian technique occur. Curiously enough no micro-burins have been illustrated or described from these sites. Possibly this is an oversight, as Bonch-Osmolovskiĭ mentions 'notched blades' and 'segments avec coup de burin.' The gravers illustrated are all on blades, and include specimens formally recalling Noailles. The massive Aurignacian types, such as core-scrapers, are conspicuously absent. Bone was used for arrow-heads, slotted points and—at Gvardzhilas Klde and Murzak-koba—for biserial harpoons.

Society's adjustment to the post-glacial environment involved an intensification of collecting (denoted by large accumulations of snail shells from Shan-koba and Murzak-koba), fishing and the pursuit of forest game with the aid of projectiles. It is precisely in hunting such game that a dog would be most helpful and among the bones from the Crimean caves Birula (*Doklady Akad. Nauk*, A, 1930, No. 6) has identified a 'wolf in the first stages of domestication' (*cf.* also *SA*, v, 174—*Canis fam.* from Murzak-koba). Let me note in the same connexion that Vera Gromova has reported the discovery of a wild mouflon-like sheep, not only in the Azilian of Shan-koba and Fatma-koba, but also in the 'Aurignacian' of Adji-koba and the 'Acheulian' Pleistocene of Kiik-koba (*Doklady Akad. Nauk*, 1935, IV, No. 12, 105–6). She also recognizes a big wild goat and an argaloid sheep at Adji-koba. Obviously the origin of European domestic sheep will have to be reconsidered in the light of these discoveries.

In the 'Azilian' of Fatma-koba, Bonch-Osmolovskiĭ discovered the skeleton of an adult male buried in a strictly contracted attitude, while at Murzak-koba an old man and a young woman had been buried side by side extended with several finger-joints amputated. Another notable discovery at Shan-koba (*SA*, v, 299) was a complete tortoise-shell encrusted with calcareous concretion on the inside, showing that it had been used as a vessel.

From the top layer at Shan-koba, Bonch-Osmolovskiĭ describes a Tardenoisian industry—associated with a modern fauna and oak charcoal, and characterized by fine geometric forms—which is also found in open stations. At At-Bash and Balin-Kosh in the Yaila such microliths are associated with coarse pots with pointed bases, reminding us of Ertebølle, el Garcel, and North Africa (*SA*, v, 97–100); and such are now (*SA*, v, 299) said to be associated with the Tardenoisian of Shan-koba too. In this Crimean 'Tardenoisian' Bibikov (*KS*, iv, 1940, 29–30) calls attention to 'trapezes with battered backs' that are associated with pottery also near the mouth of the Dnieper and at Krasno Lake near Melitopol, and with polished flint axes in the Mariupol cemetery. He concludes that chronologically the Tardenoisian is at least partly neolithic in the Crimea, where polished stone axes are exceptional.

PREHISTORY IN THE U.S.S.R. I. PALÆOLITHIC AND MESOLITHIC. B. THE RUSSIAN PLAIN.

60 Especially in the dry period after the maximum of the last glaciation, great herds of mammoths and other gregarious herbivores, grazing the Russian plain, offered a relatively easy prey to huntsmen suitably adapted. But, on the plain, adaptation meant not only social organization for collective drives and efficient missile weapons, but also the ability to construct adequate shelters against the polar blasts (MAN, 1942, 59, para. 1). The plain was visited

by Mousterians, perhaps summer hunting parties from the Caucasus or Crimea; it was first exploited by Upper Palæolithic tribes, who lived in substantial half-subterranean houses. The oldest settlements seem to be: (1) Gagarino (Zamiatnin, *Gagarino*, 1934=*IGAIMK*, 88. French); (2) Borchevo I (*TINQA*, 91–2; Efimenko, *PO*, 456–8); (3) Kostienki I (Efimenko, *PO*, 443–56) on the Don; (4) Pushkari (*KS*, ii, 1939, 10–12) on the Desna, and (5) Berdyzh on the Sozh in White Russia (*TINQA*, 71–3). All sites are cleverly located, so as to be sheltered by the banks, but adjacent to lateral gullies that could serve as natural corrals. Great heaps of bones—principally of mammoth, but including also woolly rhinoceros (on sites 1, 3), horse (on all), wild ox (1, 4, 5), a little reindeer (1, 2, 3, 4), bison (5), lion, wolf, fox, rodents, and a few birds and fishes—testify to the hunters' success.

At Gagarino, Zamiatnin found an oval hut-foundation 5·50 by 4·50 m. across, sunk about 0·50 m. into the loess, bordered with slabs of stone and filled with refuse (stained red by pigments) that he thinks must have been heaped up against the hut walls and fell in when these decayed; the centre of the hut had been destroyed by a peasant's silo. At Kostienki, Efimenko (*PO*, 383, 448 ff.; *SA*, v (1940), 279) describes an elongated depression 35 m. long and up to 16 m. wide, similarly filled, with a row of ten sunk hearths, about 1 m. wide, down the centre. In 1933–4 he found further two big 'earth houses,' each divided into two parts and sunk in the earth on either side of the long house. No plans have yet been published. The hearths were filled with bone ash; wood charcoal was practically absent. Efimenko suggests that the heaps of mammoth bones are substitutes for wood-piles.

The equipment of these plains-hunters was naturally quite different from that used by the Crimean troglodytes. The principal weapon was a dart or throwing-spear, tipped with an assymmetrically tanged flint point, 7·5 to 16·5 cm. long, that often shows shallow retouch on the bulbar surface too. Bone and ivory dart-heads have been mentioned too, but not illustrated. The heavy core-tools, so conspicuous at Syuren, are missing. As woodworking implements, however, Efimenko (*PO*, 400–1, fig. 169, and pl. XI) cites disc-like flint flakes about 4 cm. in diameter, and stout chisels of mammoth ivory. Bone awls and needles, at Gagarino, with a needle-case, are common; as are gravers (not, however, beaked), blade scrapers, and backed blades.

From Kostienki, Efimenko (*PO*, 406) has recovered two female statuettes of ivory, three of bone, and five of soft stone, and a large number of fragments, together with small figures of lion, mammoth, and horse, such as occur also at Vistonice in Moravia. Gagarino yielded three finished statuettes and several incomplete specimens. All these 'Venus-figures' conform to the type described by Burkitt in *ESA* IX, with no facial features but exaggerated sexual characters.

Finally, among the flints from Gagarino, Zamiatnin noticed three scrapers made, not of the local flint, but of the kind found in the Don cliffs some 75 miles downstream, in the vicinity of Kostienki. He thinks they may have been obtained by barter as finished products from the group inhabiting the latter site. On the strength of the bifacial working observed on so many of the flint points Efimenko assigns these stations to an Aurignaco-Solutrean phase, rather later than the pure Gravettian of the West. Recently, indeed, 'a leaf-shaped point worked on both faces' with Solutrean flat retouch' has been reported from Kostienki I (*SA*, v, 1940, 280). Otherwise no true Solutrean is known from the Russian plain, any more than from the Crimea or Caucasus.

A 'Solutreo-Magdalenian' stage in the development of the plains' societies would then be represented by Kostienki IV on the Don and Mezin on the Desna. At the latter site, located like the stations of the previous group, horse, musk ox, reindeer, Arctic fox, and snow-hare were hunted, as well as mammoth, and to a lesser extent rhinoceros, bison, bear, wolf, and glutton. Bone and ivory points replaced the assymmetrical flint points for missiles, and the same materials were still used for chisels (Efimenko, *PO*, 502) and for clubs. Among the various secondary tools used for making these important bone instruments, attention should be drawn to beaked flint points; these correspond in form precisely to the 'Zinken' described by Rust from the Hamburgian site of Meiendorf, and were doubtless employed, like these, for gouging out prepared strips of antler (Rust, *Die altsteinzeitlicher Rentierjägerlager Meiendorf*, 1937, 95, 129).

The ideology of the Mezin society was no longer expressed in realistic or at least obviously representational sculptures, but in 'abstract' symbolic

carvings and engravings the meaning of which is no longer self-evident. The carved ivories look like phalli and birds, but Breuil regards both types as really conventionalizations of the older female figures. The decoration, applied also to bracelets of mammoth ivory, consists of purely 'geometric' designs, notably the meander, used as an all-over repetition pattern. In view of the extreme rarity of this pattern in prehistoric art, its recurrence in the early neolithic ceramic art of the Dniestro-Danubian loess lands constitutes just as urgent a challenge to diffusionists to find links across the millennia between late pleistocene and early holocene, as does the technique of vase-painting, using sometimes similar designs, in China and Arizona to bridge the spatial gap between south-eastern Europe and eastern Asia or the south-west of North America!

At Kostienki IV, where the flint-work is said to be parallel to that of Mezin, Rogachev (*KS*, iv (1940), 36–40) has excavated two adjacent long houses sunk in the loess, plans of which have been published. Complex I–III measured 34 m. in length by some 5·5 m. in width, but was subdivided into three parts by low ridges of soil less deeply excavated than the rest of the floor. Ten fire-pits were arranged down the centre, and a deeper pit in the western end. House IV was 21 m. long, and contained a row of eight hearths. At the south end and on the west side, round pits about 6 m. across, each with a central hearth, seem to have been dug into the original house. The flints from the round huts are said to differ from those found in the long houses, but the huts contained implements of mammoth ivory and bones of pleistocene mammals, including a lion's skull. From them, Rogachev has illustrated two discs of slaty stone with ground edges, 3 and 8 cm. in diameter (one perforated) and a chisel of the same material with an edge sharpened by grinding. It looks as if the mammoth-hunters of Kostienki IV were already applying to stone the technique used in I for sharpening bone and ivory, and had thus created the 'polished stone 'celt'—type-fossil of the neolithic—well before the end of the pleistocene!

About this time men may have begun to spread farther north. To the station of Karacharovo on the Oka, east of Moscow, discovered by Uvarov in 1877 (*TAPS*, xxix, 361), can now be added a summer camp of mammoth-hunters on the Chusov, above Molotov, reported by Talitskii in 1940 (*KS*, iv, 41–2). As the fauna from both sites included rhinoceros, they should be fairly early, but the published artefacts give no very precise indications. In any case more extensive intertribal relations are attested for this period. Among the shells used for ornaments at Mezin are those of *Cerithium* and *Nassa reticulata*, both molluscs now living in the Black Sea, but in the Ice Age perhaps no nearer than the Mediterranean (Efimenko, *PO*, 505). In any case the shells must have been transported at least 450 miles.

Owing to the longer survival of mammoth-herds, and the persistence of a uniform environment, the adjustments that gave rise to the Magdalenian culture of the west were not evoked in Russia: so the further subdivision of the later Upper Palaeolithic is difficult. Efimenko (*PO*, 541 ff.) has indeed divided the 'Magdalenian' (in a purely stadial sense) stations into consecutive groups: (1) Kostienki II and III, Studenitsa, Cyril St. in Kiev, Eliseyevichi, Suponovo, Timonovka; (2) Hontsy, Borchevo II (lower level). But all seem essentially mammoth-hunters' settlements, and, until the relics and fauna recovered be more fully published it will remain impossible to appreciate correctly the principles of his division. Here I may note, in addition to the well-known, but not easily decipherable, engraving on mammoth ivory from the Kiev site, chisels of ivory from Eliseyevichi (*SA*, v, 287), and of reindeer antler from Borchevo II (*SA*, v, 283) finely engraved with a reticulated pattern.

First in the 'Final Magdalenian' stations like Zhuravka and the upper levels of Borchevo II and Cyril St., Kiev (*SA*, v, 145), are adjustments discernible to the early post-glacial environment. They lead on directly to the 'Sviderian stage' of the early mesolithic. Forest is now invading steppe and tundra; the herds of large gregarious beasts have disappeared, so that the old method of collective hunting is outmoded. The known settlements are mostly on the dunes of the second terrace, where bone cannot survive. They consist of a number of small isolated 'hearths,' perhaps only temporary camping-places. The prevailing flint types are microlithic (but non-geometric) tanged points that look rather like diminutive descendants of the Kostienki I type, but served in any case as arrow-heads. Such constitute an equipment suitable for the pursuit

of small forest-game by reduced human groups (Voyevodskii, *TINQA*, 237–53).

Gravers are still common enough to suggest an important bone industry. As the latter has perished, one cannot say whether the tradition of making 'celts' of bone or horn persisted in Russia as it did round the Baltic, where conditions favoured the preservation of such materials. The appearance of such heavy tools in neolithic sites like Lyalovo (*RAZh*, xiv (1925), 37–82) might favour that view. But in point of fact the Sviderian, well-known in Poland and Lithuania, is poorly represented in Russia proper. Voyevodskii reports examples from the Donetz Basin round Izyum and from the Lower Volga, but here apparently mixed, as in the Crimea, with geometric types that (in his view) should denote a later 'Tardenoisian' phase. In Central Russia he mentions only three sites, Sobolevo on the Upper Volga, Gremyatsheye (Kaluga) on the Oka, and Yelin-Bor near Gorki (*SA*, iii, 77–98). In this region the Sviderian stage does not seem to be followed by a 'Tardenoisian' with geometric microliths, any more than at Kunda or other East Baltic sites (*see* Indreko, 'Vorläufige Bemerkungen über die Kunda-funde' *Sitzber. Gelehrter Estnisch. Gesell.*, 1934). On the contrary, types reminiscent of the Sviderian reappear in the 'Copper Age' settlement at Levchino, near Molotov (*Mat. i. Issledovaniya po Archeol. SSSR*, i, 1940, 20 ff., pl. V, 1–5). At the same time the rough 'macroliths,' that from their 'Campignian' crudity have been taken as mesolithic, do not come from stratigraphically dated closed-groups, but in many cases 'have been picked out on purely formal grounds from much later complexes' (Tretiakov, *IGAIMK*, 106, 1934, 143). This criticism may not apply to the 'Campignian' of the Ukraine, reported on the Donetz, in the old Kharkov Government, in Chernigov, Volhynia, and Podolia (*Antropologiya*, Kiev, ii, 1928, 190; iv, 1930, 183—in Ukrainian); while, as in the Crimea, the tradition of geometric microliths survived on the Pontic steppes into the Copper Age. But in general the development of the mesolithic towards or into a neolithic cannot be followed in detail, as round the Baltic, by correlating types with changing sea-levels or climatic variations reflected by pollen analyses.

THE COMING OF IRON TO SOME AFRICAN PEOPLES. *By G. A. Wainwright.*

61 The accounts collected in this paper are those of the Bushongo, Baganda, and the kingdom of Angola. Each of these supplies some sort of date, and this shows that iron entered the respective countries at very different times. It came to the Bushongo in the sixth century A.D., to the Baganda about A.D. 1000, and to Angola not until about A.D. 1475. Archæologically these dates, even the sixth century A.D., are all very late. The manufacture of iron had been gradually increasing in the Near East since the beginning of the third millennium B.C.[1] Most of the Eastern Mediterranean nations entered the Iron Age between the thirteenth and eleventh centuries B.C.[2] Egypt, however, was backward, and did not begin to enter her Iron Age until the sixth century B.C. or even later,[3] but even that is much earlier than the earliest to which tradition ascribes the appearance of iron anywhere in negro Africa.

A theory has been strongly held in some quarters that the art of iron-working originated in Central Africa and spread thence over the world. However, these traditions show that such a belief is diametrically opposed to the archæological evidence.

BUSHONGO.

These people now live between the Kasai and Sankuru Rivers in the Belgian Congo, and have the following two legends as to how they learned of iron. The Bambala, one of the sub-tribes, say: "One day Woto found a great stone which

[1] The specimens of very early man-made iron at present known are those from Tell Asmar in Mesopotamia, Wainwright, *Antiquity*, 1936, pp. 7, 8; Chagar Bazar in North Syria, Mallowan and Desch, *Iraq*, iii, pp. 11, 26, 27; the Great Pyramid of Gizeh, Hawkes, *Antiquity*, 1936, p. 356. All these are of the same age, *i.e.* rather before 2700 B.C. Somewhat later, about 2500 B.C., there is the lump of iron from Abydos in Egypt, Hawkes, *l.c.*, pp. 356, 357. Several fragments found at Mari on the Euphrates are datable between 3000–2700 B.C.: Parrot, *Archiv für Orientforschung*, xii, p. 151.

[2] Wainwright, *Antiquity*, 1936, pp. 19–23.

[3] *Ibid.*, p. 23.

"Bumba the Chembe (God) had evacuated. "'What is that?' he asked. The people re- "plied: 'It is the excrement of God.' Then "Woto commanded that it should be carried to "the village and honoured. The following night "Bumba appeared to Woto in a dream, and said "to him: 'You have acted wisely in honouring "'everything which comes from me, even my "'excrement. As a recompense I will teach "'you how you should make use of it.' This is "how Bumba showed Woto how to extract iron "from the ore."[4]

The legend of the Bangongo, another sub-tribe, runs that the use of iron was taught to mankind by certain spirits who appeared to men in a dream, saying: "What! You are a strong people, and "you walk without weapons in your hands!" They indicated to the men a certain river called Mosanja, where they told them to take some earth. They then told them to collect black ant-hills of about the size of a man's head. With these ant-hills they taught them to construct a furnace, and to smelt the ore which they had got out of the earth that they had taken from the river.[5] It was added that the furnace which was taught to men by the spirits was the one which was still in use until the native-made iron was superseded by the imported European metal.

The Bambala legend is of first-rate importance in that it names Woto, who was the fourth king of the Bushongo and was reigning about A.D. 510. This date can be deduced with considerable confidence, for the Bushongo have meticulously kept their traditional history of their one hundred and twenty-one kings, with particulars about each of them that were of interest. Bumba, the High-God who made the revelation, had been the first king and had been ruling about A.D. 450. He is said to have been a 'white man,' and to have created everything including one white man among many black. He appointed the white man to be supreme chief over the others, after which he retired to the skies and became the High-God.[6] Woto was the grandson of this white man, and is remembered as a mulatto and a great culture-hero (pp. 21, 44). The knowledge of iron was only part of a great influx of civilization which took place in Woto's time, *i.e.* about A.D. 590. His mother, daughter of the white supreme chief, taught men how to build houses (p. 21). Woto himself introduced the practice of circumcision and the use of personal names, as well as the smelting of iron (pp. 21, 37). His wife discovered how to make salt by burning certain plants, and a man invented the trial by poison (pp. 21–23, 37). Also the first two of the three great waves of Bushongo migration took place in Woto's reign (pp. 22, 23, 24). The revelation about iron was made while the Bushongo were still in their original home by the river which they still speak of as the Chale, and is no doubt the Shari which flows into Lake Chad.[7]

There seems to be some metallurgical confusion in the legend of the revelation to Woto. A 'great stone' which could be carried off, and which had been "evacuated" by the god in the sky and was his 'excrement' sounds like an iron meteorite rather than a lump of iron ore. Yet the legend goes on to say that as a result of finding this stone Woto learned how to smelt iron from the ore. But, of course, there is no connexion between the process of knocking a piece of ready-made iron off a meteorite and that of smelting iron from its ore in a furnace. On the other hand it is possible that the story refers to a large lump of hæmatite, which is the usual ore used by the natives, and which can be of such a colour and appearance that it might evoke unpleasant suggestions.

The idea that meteorites or thunderbolts are the 'excrement' of the sky occurs elsewhere in Africa. In the mountains of Togoland, just east of the River Volta, meteorites are common and the local inhabitants, the Atakpamo, call them 'excrement of the sun.'[8] In the Benin country *is-ẖvā*, 'faces of thunder,' is the name given to an oblong stone found in the earth, on rocky soil, or in dead trees struck by lightning (?).[9] This is

[4] Torday and Joyce, *Les Bushongo*, p. 235.
[5] *Ibid.*, pp. 248, 193, 194.
[6] *Ibid.*, pp. 20, 21, 46. For the king-list, *see* pp. 17–19, and *for* the dates, pp. 30, 37.

[7] *Ibid.*, pp. 43, 44, and *cf.* p. 49. They came from the far north. They used the throwing-knife which is characteristic of the southern and south-eastern Sahara, and they preserve an ancient secret language, Lumbila, which may be related to some of the languages of the Shari district. Moreover, their original foodstuffs and original nudity are in accord with such a place of origin.
[8] Plehn, *Mitt. des Seminars für Orientalische Sprachen*, II (1899), 3te Abt. *Afrik. Studien*, p. 96. Ancient blue beads are dug up in a certain place, and these they similarly call 'excrement of the rainbow serpent,' pp. 96, 98, 99. No doubt it is their blue colour that causes them to be connected with the sky.
[9] Melzian, *Bini Dictionary*, p. 99.

clearly the stone axe that so commonly represents the thunderbolt. The thunderbolt itself is called *dvă* by these people.[10]

The *Bangongo legend* is quite different. It gives no clue as to the time of the revelation or as to the place, unless the Mosanja River can be identified. But it is definite that the people were taught to collect their ore from the river bed, just as has often been done in various parts of the world. The antiquity of the blacksmith's craft is indicated by the fact that the smelting furnace which they were taught to use and continued to use until recently, was of the most primitive. It was merely a hole in the ground about 50 cms. wide and deep. Two pairs of bellows were used with it, as were the lumps of ant-hill referred to in the legend. It is a variety of what is known as the Catalan furnace, and is common among the neighbours of the Bushongo.[11]

The Basonge, a neighbouring tribe, say that the art of smelting and working iron was taught to mankind by Efile Mokulu.[12] This personage is the Supreme Being, who appears to live in the sky, though sometimes it seems that he lives in the centre of the earth. He was never a man.[13]

In better-known lands than Central Africa, skill as a smith has been ascribed to divine intervention. This is in the Muslim world, where David has a great reputation as an armourer. In the Koran, Chapters XXI. 80: XXIV. 10, Allah is said to have "softened the iron for him, saying, "Make thereof complete coats of mail, and rightly "dispose the small plates which compose the "same," and to have "taught him the art of "making coats of mail for you, that they may "defend you in your wars." Elsewhere in the Koran, Chapter LVII, Allah is said to have "sent down [to his apostles] iron, wherein is "mighty strength for war, and various ad-"vantages unto mankind." One of the commentators goes so far as to say that Adam brought down with him from Paradise five things made of iron, viz., an anvil, a pair of tongs, two hammers —a greater and a lesser, and a needle.[14]

UGANDA.

In this country traditional history goes back to the coming of Kintu, the first king of the whole land. He was probably of Galla stock, and he came from the north or north-east thirty-two generations before the time that Roscoe was collecting his information,[15] which would put his arrival at about A.D. 1000.[16]

The population of Uganda is divided into many clans, of whom the Bushbuck, Genet, and Tailless Cow clans are the smiths. The Genet clan traces its descent from a certain Luija, who was an iron-worker living in Unyoro. The father of the clan was a man named Walukaga, presumably a descendant of Luija, though this is not stated. In Kintu's time Walukaga came from Unyoro to be the king's smith and to make his weapons for him (p. 171).

The Bushbucks claim to have been the first iron-workers (p. 379), and to be descended from the offspring of the first marriage of a woman called Wanyana (p. 163). This story also goes back to the Kintu period, for Wanyana also had an illegitimate son, who was Kimera the great grandson of Kintu. Unyoro figures here once again, for Kimera and his mother were fetched to Uganda from Unyoro, where he was born while his mother was wife to Wunyi king of that land (pp. 163, 215). Wunyi was contemporary with Kintu's son Cwa, second king of Uganda (p. 169, note 1), and Kimera succeeded Cwa as the third king of Uganda (p. 215). There is also a story that it was Kimera himself who, when he was in Unyoro, sent the first iron hoes and spears into Uganda (p. 378). Elsewhere Roscoe gives this

[10] Melzian, *Bini Dictionary*, p. 14.

[11] *Ibid.*, pp. 193, 194, and fig. 269. Fig. 272 and Pl. XXII show the bellows, though being used by the smiths, not by the smeltees. They are bowl-bellows. The Basonge, between the Sankuru and Lualaba Rivers, also use a mere hole in the ground, and bowl-bellows. Torday and Joyce, *Notes ethnographiques sur les populations habitant les bassins du Kasai et du Kwango oriental*, p. 38. The northern Batetela also use the same type of furnace, *ibid.*, pp. 135, 138.

[12] *Ibid.*, p. 38.

[13] *Ibid.*, pp. 25, 26, and note 1.

[14] Sale, *The Korân*, note at the end of Chapter LVII.

[15] J. Roscoe, *The Baganda*, pp. 186, 187. The page references in the text refer to this work.

[16] Taking Roscoe's estimate, which would give 27 or 28 years to a generation, de Calonne-Beaufaict, *Azande*, pp. 217, 218, gives a quantity of information showing that the average lengths of reigns are: nearly 30 years in Dahomey; between 25 and 30 years in Ankole; 27 years among the Azande; 27 among the Mangbetu. Verhulpen, *Baluba et Balubaisés du Katanga*, p. 138, finds that, in recent centuries, reigns of the Baluba kings have averaged 20 years each. On pp. 140, 141, Verhulpen calculates 20, 25, or 30 years for the reigns of the Batumbwe. But for the Bushongo various calculations lead Torday and Joyce, p. 36, to allow no more than 15 years to a reign.

story to Kalimera,[17] who, while he was in Unyoro, became the father of Kimera. If this is not merely a confusion between two very similar names, it would put back the coming of iron to Uganda by a generation.

The Tailless Cow clan has been smiths from the first, though no indication is given as to how long ago that may have been. However, like the others, they also originate in Unyoro, for their progenitor was Katongolo, a man who came from that country (p. 170).

Stam [18] mentions the legend of Kintu, but merely says that one of Kintu's children learned the art of working in iron and became a great hunter. He gives the man's name as Mulanga, but does not say how or where he acquired his knowledge. In using his iron to become a great hunter Mulanga was following the example of the elephant hunters of the third and second centuries B.C. in Abyssinia and Somaliland, and also that of the natives of Somaliland who in the first century A.D. imported "iron, which is made into "spears used against the elephants and other wild "beasts, and in their wars." [19] The same collocation of ideas is found again in Southern Nigeria, where Ogun is not only the god of iron and smiths, but also of hunters and warriors.[20]

Iron was by no means the only element of civilization that came to Uganda in Kintu's time. One account says that Kintu himself brought the first plantain-tree (p. 428). Otherwise it is his companion Manyangalya who is said to have brought it, as he did the seeds of the bottle-gourd plant (p. 151). One tradition says that Kintu also brought the first bark-cloth tree and the people who knew how to make the bark-cloth, though another says it came from Unyoro (p. 403). The origin in Unyoro is unlikely in itself (p. 403), and the introduction by Kintu, i.e. from the north or north-east, is made probable by the fact that Manyangalya is said to have brought it as well as the other plants. Moreover, Manyangalya's descendants, the Mushroom clan, have been bark-cloth makers from the days of Kintu (p. 151). Another story says that Kintu brought the banana and other plants and the hen from heaven.[21]

Yet although Kintu introduced so many things, the smith's craft was not one of them. On the other hand tradition is unanimous that it came to Uganda from Unyoro on the north or north-west, and that it was coming about the time of Kintu, *i.e.* round about the year A.D. 1000. Not only is it noteworthy that the craft was not brought from the north-east by the 'Galla' Kintu, but also that it did not work up from the south-east from Zanzibar and other Arab and Persian settlements on the coast. It is also the fact that the *-uma, -chuma* root for iron which is used in Unyoro and Uganda has spread down to the coast and into all the Swahili dialects, even the most archaic,[22] to the exclusion of any Arabic word. Moreover, neither the Banyoro or the Baganda use the bag-bellows of the coastlands, but both use the bowl-bellows,[23] which belong to the interior of the continent. Finally, the tradition that the knowledge of iron came from Unyoro is in accord with the probabilities, for iron ore is plentiful in that country (p. 378).

Our evidence takes us one step farther in our inquiry into the early history of iron in Africa, for it shows that the industry had already been introduced into Unyoro before about A.D. 1000.

It is possible, however, that in spite of the unanimous verdict of tradition the iron industry is older in Uganda than the time of Kintu. Roscoe says (p. 379), "There can, however, be "no doubt that iron-workers were to be found "in the south-west of Uganda long before the "time of Kimera and even before Kintu's reign, "and that it was from these parts that the skilled "workmen came." This is from Kokl, the only part of the country where iron ore is found, and where the iron industry is naturally concentrated to-day, but Roscoe gives no evidence for this view.

ANGOLA.

The account of the coming of iron to this country has been recorded by G. A. Cavazzi in his *Istorica Descrizione de' Tre' Regni, Congo, Matamba et Angola Situati nell'Etiopia Inferiore Occidentale*. Bologna, 1687. In his section no. 126, which is entitled "Origin or Ancestry of the Kings "of Angola, otherwise Dongo," he says on pp. 290, 291: "They say, therefore, that the first was a

[17] J. Roscoe, *Twenty-Five Years in East Africa*, p. 220.
[18] *Anthropos*, 1908, p. 216.
[19] W. H. Schoff, *The Periplus of the Erythraean Sea*, p. 24, § 8.
[20] Melzian, *Bini Dictionary*, p. 136.
[21] Sir H. H. Johnston, *The Uganda Protectorate*, ii. p. 704.

[22] *Ibid.*, *A Comparative Study of the Bantu and Semi-Bantu Languages*, i, p. 132; ii, p. 40; Nos. 21 f and g are the most archaic.
[23] Banyoro, J. Roscoe, *The Northern Bantu*, Pl. II, p. 74; Baganda, *ibid.*, *The Baganda*, p. 380, fig. 62.

"certain Angola Mussuri, a name which signifies "'King Blacksmith.' To that man, as teacher "of the blacksmith's craft, they assign one of "their idols; and [they say] that he was that "fellow who was more intelligent than the others "in having discovered how he might manu-"facture axes, hatchets, knives and arrows by "working iron. Through the useful innovation "these things served the negroes for use in war, "just as in peace they were of value to this man "to make himself rich.

"They add further that he gained the affection "and acclamation of the people by means of his "accumulated riches, which he wisely converted "into a subsidy for the public needs, when, with "the exceptional virtue of a kindness to which "they were not accustomed, he abundantly "provided them with those same provisions "which had been contributed to him in payment "of his own hard work. And just then there "occurred so calamitous a dearth, that the un-"happy inhabitants would without doubt have "died, if Mussuri had not, with the affection of a "father and with the spirit of a king, opened the "storehouses of the supplies which he had "collected. This magnanimous and, in that "extreme misery, greatly opportune action "bound the hearts of all to acknowledge in him-"self the reward of a singular foresight and great "good sense, by the superintendence of the "government of that tract of country which is "called Dongo. So, having been called together "on that account, the chiefs of the provinces "unanimously acclaimed him as the first N-gola, "that is to say the first king. And, therefore, "taking another name without losing the first, "all that tract of country was called the Kingdom "of Angola.

"Later on, having gained possession of the "country by force of arms, the Portuguese did "not care to alter its name, but wished that it "should perpetuate the memory of Mussuri, who "left the blacksmith's craft in just as much "honour as the fame of his own virtue. In those "regions the craft is still just as much esteemed "as is the excellence of the most famous sculptors "in Europe." [24]

Most unfortunately Mussuri's innovation is described by a word which I am told is quite vague. The word is *dirrozzare* which means "to "trim, polish, smoothe, rough hew, civilize," and inquiries have failed to show that it has any special technical sense. However, seeing that his innovation enabled him to manufacture imple-ments, the passage can hardly mean that he merely taught the people how to polish iron. Again, as he was worshipped as a god, he no doubt introduced the entirely new knowledge of smelting and smithing iron to a people who had previously been ignorant of it. I have, therefore, translated *dirrozzare* by the equally vague 'work' which will cover the whole process. There was evidently a great demand for his products, which he was able to sell at a good price,[25] and so acquire the riches with which he was able to relieve the needs of the people.

Fortunately the date of this introduction of iron-working to Angola can be well ascertained. On pp. 291, 294, Cavazzi says that one of Mus-suri's daughters was a certain Tumba Riangola and that her second son was Angola Chiluvagni. He is the king whose name is otherwise spelled N'gola-tshivalñi, who about 1525 made war on his neighbours and conquered them, one by one, with the help of the Portuguese from Loanda. In 1557 he sent an embassy to Europe and in 1559 he sent a second embassy to Lisbon, and died.[26] If the grandson was on the throne about 1525, the grandfather, i.e. Mussuri, would have been in his prime somewhere between the years 1450 and 1475. Hence, Mussuri would have introduced the knowledge of iron-working to Dongo during the years about A.D. 1475.

Moreover, the place of the introduction is also well-known, for in the fifteenth century Dongo was a little fief of the kingdom of Kongo. The capital of Kongo was the well-known San Sal-vador, and Dongo was situated on the right bank of the Kwanza, the river which flows out just south of St. Paul de Loanda.[27]

[24] There is a so-called translation of the book into French by J. P. Labat, but this is more a work of his own founded on Cavazzi than a translation. There is a German translation which, though literal and accurate, sometimes leaves out passages or abridges them.

[25] There is a vast intertribal trade in iron going on all over Africa to-day. The excellence of the products of some tribes enables them to command very high prices. Thus, in East Africa the ornamental iron chains made by the Akamba were so prized by their neighbours, that in time of famine the smiths were able to charge as much as a load of provisions for one: Dundas, *Journal of the Royal Anthropological Institute*, xliii, p. 504.

[26] Avelot, *Les grands mouvements de peuples en Afrique: Jaga et Zimbo*, published in *Bull. de géographie historique et descriptive*, 1912, Paris, pp. 141, 142.

[27] *Ibid.*, *op. cit.*, p. 140.

Mussuri evidently introduced the bowl-bellows, for that is what Cavazzi shows the smiths using, in his figure on p. 290. Their hammer is a short cylinder of stone or iron grasped vertically in the fist without a handle of any sort.

Mussuri thus takes his place among those blacksmiths who have made a name in the world. Another is Kawa, who in the legendary history of Sasanian Persia raised the revolt against the tyrant Zahhak. His leathern apron became the national standard.[28] Sons of blacksmiths who have made their mark in the world are Sophocles and Mussolini. In the Luba language of the Katanga the word Kasongo means 'blacksmith,' but among the Bayaka on the Kwango river it has now come to be the title of the ruler.[29]

[28] A. G. and E. Warner, *The Shâhnâma of Firdausi*, i, p. 157. The flag, or rather its gorgeous later representative, was captured by the Arabs at the battle of Kadisiyya, A.D. 637, p. 143. Its capturer exchanged it against 30,000 dinars, though it was well worth 1,200,000; Maçoudi, *Les prairies d'or* (edit. de Meynard and de Courteille, Paris, 1865), iv, p. 234. The story of Kawa's successful revolt with further details about his standard is given again in Tabari (trans. Zotenberg), i, pp. 117–119.

[29] Sir H. H. Johnston, *George Grenfell and the Congo*, i, p. 195, and note 1.

AN UNUSUAL FLINT IMPLEMENT FROM EGYPT, IN THE SELIGMAN COLLECTION.

62 (1) *Description by the late C. G. Seligman, M.D., F.R.S.*

The stone implement illustrated in the accompanying figures was acquired in Luxor in 1914 from an Englishman who kept a small curio shop. He stated that he had bought it from an Egyptian with a number of other implements, all said to have been found in the neighbourhood, which inspection showed to be typical high-desert palæoliths, and he supposed that it had been picked up with them. In shape and size the implement is unusual, in fact none like it was known to Mr. Reginald Smith, nor have I seen any other in the collections of Egyptian stones that I have handled. Its greatest length, not following the curve, is about 22 cm., with a breadth of about 5 cm., and with a portion of the original rough surface of flint nodule at one end. Its colour is a dull medium brown, with none of the warm lustrous surface that is fairly common on the older palæoliths from the Theban plateau. A section would be shaped somewhat like a diamond pip of a playing card, the maximum height being in transverse section with one half of the vertical axis longer than the other. The flaking is bold, evidently the work of an expert who had the final quality of his implement in mind.

There is nothing to indicate the purpose of this strange implement, but there is minute splintering of the convex edge over a distance of about 4 cm., showing that it has been used as a chopping tool, and there is also some comminution of the edge, limited to one surface of what might be described as the 'base.'

(2) *Comments on a Flint Implement from the Seligman Collection. By Gertrude Caton-Thompson, F.S.A., Newnham College, Cambridge.*

As far as may be judged from illustrations only, I have little hesitation in assigning the pick-like implement from the Seligman Collection to a flint-quarry industry.

In Egypt, only two areas with extensive flint quarries have, I think, so far been discovered. The first group lies in the Wadis Sheikh and Sojur, draining the Eastern plateau, about four hours' ride from Maghagha. The late Capt. Seton-Karr discovered these in 1896, and they were attributed to historic times.[1] Frau Elise Baumgartel and colleagues visited them in 1930,[2] and, I believe, assigned to them a Neolithic (Campignian) date.

The second big group of quarries—really shallow surface workings—was found by E. W. Gardner and myself in 1930–1, on the edge of the scarp overlooking Kharga Oasis on the East, where they formed disconnected patches covering many square miles. In preliminary reports[3] I have proposed a 'neolithic' age for them, as they supplied the material for the local Kharga 'neolithic' industry, contemporary probably with the Early Predynastic in the Nile Valley.

[1] Forbes, H. O.: *Bull. of the Liverpool Museums*, Vol. II, January, 1900. H. W. Seton-Karr, *Annales du Service*, 1905.

[2] Baumgärtel, E.: *Ancient Egypt*, Part IV, December, 1930.

[3] Thompson, G. Caton: MAS, 91, 1932, and Plate E, fig. 2; MAN, 158, 1931.

a *b*

AN UNUSUAL FLINT IMPLEMENT FROM EGYPT, IN THE SELIGMAN COLLECTION.

The 'quarry' industry and its affinities awaits full publication when opportunity presents.

The Seligman implement appears to have a closer resemblance to the implements from the Kharga quarries than to those from Wadi Sheikh. In the Museum of Archæology and Anthropology, Cambridge, I have, from the Kharga material, had no difficulty in finding a reasonably close parallel, and Professor Garrod agrees. The Kharga specimen lacks the rather deeply bitten resolved flaking shown on the ventral face of the Seligman tool in the concave bend. But such marginal flaking is well represented on numerous other 'bars' from these quarries.

In the Seton-Karr collection from Wadi

Sheikh, the nearest comparable published specimen would appear to be that figured in *Bulletin of the Liverpool Museums*, II, Jan. 1900, Fig. 34.

The Wadi Sheikh is about 280 miles from Luxor where the Seligman implement was acquired. The Kharga site is about 120 miles distant only. Thus on grounds of geographical propinquity the probabilities of origin lie with Kharga. There is, however, the possibility that other flint workings lie undiscovered on the western plateau behind Thebes.

THE ORDER OF THE LETTERS IN THE GREEK ALPHABET. *By Professor John L. Myres, O.B.E., F.B.A.*

63 The place of the Greek alphabet—or alphabets, for it is a group of closely related variants, like the Greek dialects—among other early systems of alphabetic writing, is fairly clear in essentials, but still obscure in certain detail.

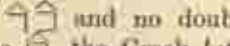
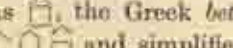
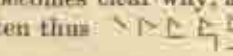
The names of many of the Greek letters—*alpha, beta, gamma*, and the like—are sufficient evidence that Greek acquaintance with alphabetic writing came from the Phœnicians, whose linear (and mainly rectilinear) alphabet is seen, fully developed, on the sarcophagus of Ahikar in the museum at Beirut, which is dated about 1250 B.C. Thence onward, it suffered very little change *on* stone, but there is some divergence and individual vagary in painted vase inscriptions and *ostraka*. The precise forms assumed by the Semitic names of the letters result from their communication by Aramaic-speaking Semites, and this consideration sets also an upward limit to Greek knowledge of them. Isaac Taylor, *The Alphabet*, 1883, II, 24; *cf.* L. J. D. Richardson, *Hermathena*, LVIII, 1941, 58.

That we have not earlier or more numerous examples either of Phœnician or of Greek writing results less from chance than from the strong probability that early inscriptions, whether carved or painted, were on wood, and have perished. Evidence for this is the form of the letters themselves, composed of lines either straight or only slightly curved—the *slashes* of a knife on wood, not either chisel-cuts or strokes of a brush. Hence the blurred and irregular variations when Phœnician letters are painted or written with a reed-pen. These wood-craft forms occur also not only in early Greek letters, but in Lycian, Lydian, Phrygian, and especially in Cypriote writing. This inference that what may be described as an epigraphic 'wood age' preceded the 'stone age' to which most extant inscriptions belong, is confirmed by the sudden appearance both in Cyprus and in Greece of schools of stone sculpture already conventional, and characterized in technical detail by similar knife-work rather than chisel-work. Of this iconic 'wood age' the Greek word *ξοανόν* is reminiscent (√ *ξέω* 'scrape' or 'shave') for a 'carved' rather than a 'graven' image, like the word *τύπος* (√ *τύπτω* 'beat') for the hammered bronze plating of early statues, which occasionally survives. Only at a later stage does the use of another woodworker's tool, the centrebit, account for the circular ○, ⓘ, ⊖, and ◯, often with centre-point ⊙, and the semicircular strokes in B, P, and C (for early I).

There is, therefore, no difficulty in an ample allowance of time for the spread of the art of writing, or for the establishment of a family of distinct but related alphabets in adjacent regions, before the first experimental execution of alphabetic inscriptions on stone or on painted clay.

The hypothesis of a wood-craft phase in the history of these alphabets also helps to explain the small number of alphabetic or of Cypriote-syllabic signs which are identical with signs in the Minoan linear scripts of Crete and the Greek mainland. Again, with the exception of a very few painted, stone-cut, or gem-engraved inscriptions, the Minoan scripts are known to us from clay-tablets, and moreover, are written not by impressing an angular graver, as in cuneiform, but by scratching with a sharp point, as on the wax-coated tablet, folded face-to-face for protection, which is mentioned in Homer, *Iliad*, VI, 169, *γράψας ἐν πίνακι πτυκτῷ*, and remained in use throughout classical times; an early example is Herodotus VII, 239. In Egypt the wax-tablet was in use under the XVIII Dynasty. In this far more facile technique, personal differences of handwriting—comparable with our own—are more conspicuous, the sign-forms vary widely, and are often variously simplified by

omitting the less significant strokes, and curvilinear elements are common and persistent. There are, it is true, some fifteen or twenty signs which have become completely rectilinear ⊤ ⊥ + ⋕ ⍑ and some of these reappear in the Cypriote syllabary, but the large majority of Minoan signs remain curvilinear and recognizably pictorial. This Minoan technique of *sketching* on clay need not have gone out of use completely, when the knife-cut wood-craft technique was applied to render letters on large or immovable objects; and both chisel and brush were used for writing alongside the pointed tablet-graver. It has long been recognized that the use of the word *σήματα* 'symbols' on the one occasion when any sort of writing is mentioned in Homer, *Iliad*, VI, 169, applies better to pictography than to alphabet or syllabary; and on the other hand that the use of *γράφειν* and *γράμματα* ('scratch') for alphabetic writing in historic times is inappropriate to any but the simplest linear letters.

Some Greek Letter-forms.—Much depends, in the transmission and modification of linear designs, decorative and symbolic alike, on the order in which the elements of the design are executed. The history of Greek minuscule, and of mediaeval and modern handwritings, is full of examples; and some of the minor puzzles of early Greek epigraphy may be solved by applying this criterion. For example, the Greek letter Β bearing the name *beta*, and its Phœnician counterpart *beth* 𐤁, were alike abbreviated sketches of a 'house' (Semitic *beth*, as in *Beth-lehem*). But whereas the Phœnician 𐤁 was drawn in the following order: —  and no doubt was originally completed as  , the Greek *beta* was drawn thus  and simplified to  and Β. And it now becomes clear why, at Corinth, *beta* was  written thus  and set on its side.

Similarly the Phœnician *lamed* 'ox-goad,' whatever its original pictograph, was written alphabetically  and later  . This might either be abbreviated to  or to  . Hence the two forms of Greek *lambda*,  in the 'western' alphabets (and consequently L in Latin), but Λ in the 'eastern.' That one small group of alphabets, which are in general 'eastern,' adopted the 'western' L was a commonsense remedy for the confusion of Λ with one of the various forms of *gamma*  Λ , the last of these passing on from the 'western' alphabets into Latin C, which is still further remote in form from Latin L.

Vowels and Consonants.—The most important difference between the Phœnician alphabet and the Greek is the Greek use of certain signs, which represent what may be described as 'light' consonants in Phœnician speech, to represent the four principal vowels *a*, *e*, *i*, *o*, to which *u* was added later by similar perversion of Phœnician *vav*. This revolutionary change was the response to a profound difference in word-formation between Semitic and Indo-European speech. In Semitic languages there is a great wealth of consonantal sounds, especially of gutturals and sibilants. Almost all words are formed from 'roots' composed of three consonants, between which the vowels are varied according as the resulting *word* is verb, substantive, and so forth. Prefixes and suffixes outside the trilateral 'root' are supplementary to this internal vocalic change. To attempt to write out, with vowels as well as consonants, words constructed in this way, risked failure to recognize, in a group of five or more signs, the permanent consonantal signs which gave the meaning, among the shifting vocalic signs which gave the grammatical construction. For ordinary use, among Semitic-speaking folk, the consonants gave sufficient indication of the subject of discourse, as in English *r · f · l · th · w · t · r · b · t · l·* registers *refill the water bottle*, without serious ambiguity, because in this context even *rifle* and *battle* do not make better sense than *raffle* and *bestle*.

Indo-European languages, on the other hand, with a smaller range of consonants, form their words with vowels which may either begin or end the 'root,' and within it are distinctive, as in *cad*, *cod*, *cud*. Their grammatical forms too—though vowel modification occurs (as in *ran* and *run*) are mainly prefixes and suffixes, often of more than one syllable, and also containing distinctive vowels. To be understood, one must write every vowel in its place. This was effected by using, to denote the principal vowels, the signs for the unwanted 'light' consonants, which were, in fact, highly vocalized, and eventually by using these in pairs to denote what the Greeks rightly called 'double-voiced' vowels (*δίφθογγοι*) such as *ai*, *ei*, *ou*. The reason why *u* was omitted at first, and why it was later appended, will be clear when we consider the significance of the 'alphabetical' order of the whole series of symbols.

'*Alphabetical*' *Order*.—We are so used to the customary order of the alphabet that it has perhaps escaped most people's notice how curious that order is. If the Greek alphabet had been an original invention, for merely phonetic use, we might have expected that all the vowels would be grouped, all the labials, all the dentals, and so forth. But the vowel signs stand in approximately the same positions, up and down the list, as in the Phœnician alphabet, where they are not vowels. The whole traditional order, moreover, is ancient; attested by painted 'abecedary' inscriptions on early Greek vases, and by the alphabetical arrangement of the stanzas and verses of *Psalm CXIX*. There are, however, a few significant variations in the order of letters in the 'abecedaries,' and it is certain that in some early Greek alphabets the letters from *Y* onwards were not in use, but the *u*-vowel was represented by O and the double consonants $\phi\ \chi\ \psi$ by pairs of consonants, *ps*, *ph*, *ks* (or *kh*). The 'alphabetical' order, therefore, has been extended, and also slightly varied. Is it possible to detect its original meaning and purpose?

Languages differ in the number and variety of their consonants within each principal category, labial, guttural, dental, sibilant, and the like. In Etruscan the medial consonants disappeared and with them the letters B, ∫, △. In some Greek alphabets the aspirates faded, leaving the signs for *ph* and *kh* (Ψ in Chalcidian) free to be employed as numerals (p. 114 below): Φ=1,000; Ψ=100; X=10, as in Latin. In Phœnician, on the other hand, there were the five 'light' consonants, and four sibilants, *zaïn* I, *sameh*, ∓ *tzade* ⋀, and *shin* W (*sh*): the light consonants, as we have seen, were used for the Greek vowels, and the sibilants respectively for *z*, *ts*, *ks*, and *s*, while another form T occurs rarely to denote Greek *ss*, which was sometimes written ττ and probably represented our *tch* as in *clutch*. The use of Ψ in eastern Greek alphabets for *ps* is another example of the Greek inclination to write a compound sibilant *ps*, *ts*, *ks* with a single sign. How easy it is to misappropriate conventional and arbitrary signs is illustrated by the confusion of H=*ē* or *i* with H=*s* in the Cyrillic alphabet of Russia, and in that approximation of the variants of Γ and P which was remedied, not by more careful writing, but by giving to P that extra stroke which differentiated the 'western' and the Latin R from P. Similarly the two sibilant-signs ⋀ (*tzade*) and W (*shin*) became confounded in the Greek variants of *sigma* (M ϟ Σ): the sign C means *s* in some alphabets, *o* in others, and *s* in others, and the sign ⋛ means *b* in most alphabets, but *s* in Corinthian, and *m* in the Sabæan and Æthiopic scripts.

It should be noted at this point that the Greek name *zeta* was applied not to the Phœnician letter named *tzade*, which had disappeared, but to the Phœnician fifth letter *zaïn*, which remained fifth in the Greek alphabets under its new name *zeta*, derived from *tzade* not from *zaïn*.

These occasions for change either in the significance of a sign, or in the place of a sign (or its name) in the series, are noted here, because they are the principal departures from what appears to have been the original arrangement of the signs common to Phœnician and to Greek. Written in four vertical columns, in alphabetic order, they reveal, when read across the columns, remnants of an arrangement in which each of the vertical columns had once contained (1) a 'light'-consonant or Greek-vowel sign; (2) a labial; (3) a guttural; (4) a dental; and (5) the sibilants have a similar distribution, though more deranged for reasons already noted.

The original arrangement may therefore have been something of this kind:—

A aleph	E he	I yod	O ain
		[*lamed*]	
B beth	F vav	M mem	P pe
	[*zaïn*]		[*tzade*]
G gimel	H heth	K kaph	Q koph
			[*resh*]
D daleth	Th teth	N nun	T tau
[⋀ tzade]	Z zaïn	Sh sameeh	S shin

This leaves a vacant sibilant in the A-group, and supernumerary *tzade* in the O-group: resulting from early dislocation, already suggested by the use of the name *tzade* (*zeta*) for *zaïn*. It also leaves out *lamed* and *resh*; but as these are distributed into different groups (I-group and O-group), it may be that originally they ranked with the sibilants, and were left where they stood when new sibilants came into use.

That some such traditional scheme was not wholly forgotten, when the 'light consonants' became Greek-vowel signs, may be inferred (1) from the fact that when *vau* was vocalized as Y (*u*), another sign, or variant of the same sign F

(which has no Semitic name but only the late Greek name *digamma*), replaced it as the aspirated labial (=*f*) between 𐤆 (*z*) and 𐤇(*ẖ*); (2) from the new position of *Y* (the original *waw*) not only at the end of the original four groups of five signs, but also at the head of a new fifth group, consisting of single signs (in the Greek manner already noted) for double consonants. By this time, however, the Greek alphabets had already wide distribution, and had diverged into 'eastern' and 'western' varieties, which used these supplementary signs differently, as follows:—

	Carian	*East Greek*	*West Greek*
Φ	consonantal	*p*+*h*	numeral: 1,000
X	,,	*k*+*h*	,, 10
Ψ	,,	*k*+*s* or *p*+*s*	,, 100

while *X* is used also for *k*+*s* in Latin.

As Ϙ (*q*) is written *ϕ* in Phœnician, and never occurs in the same Greek alphabet with *ϕ* (*ph*), I think it likely that in dialects which were content with the guttural signs C and K (and we may remember that Latin was content with C only for (*k*) and (*g*) until Ɔ was invented for (*g*)), the superfluous Ϙ was used as an aspirated *p*+*h*, and was transferred to the new fifth group of double consonants. Before that happened 𐤐 had been used for *p*+*h* at Gortyna and in Thera (as + was used in Cypriote for *ka*, *pa* and *fa*) and C had been so used in other parts of Crete, perhaps inheriting 𐤒, an early form of Phœnician *p*.

For a similar economy of signs, compare Latin disuse of K in favour of C, compensated only later by inventing Ɔ (C=G) for (*g*), and retaining the old C for (*k*).

To complete the new fifth group—a ragged regiment, in any case—there were soon other recruits, though they never found a place in any extant 'abecedaries': (1) T for *t.s* or *s.h* as in METAMBPI (on coins of *Mesambria*) and for the *σσ* in *Ἁλικαρνασσός*; (2) 𐤔 for *sp*: (3) the mysterious *agma*, which was a name for the combination *ng* or *nk*, but was never written, its place being filled by *gk* or *qk*: L. J. D. Richardson, 'Agma, a forgotten Greek letter': *Hermathena*, LVIII (Nov., 1941), 57–69. But what actually filled the vacant place in the 'eastern' alphabets was a supplementary *o*-sign (Ω) known as *o-mega* or 'great-*o*' in Greek, while the correlative name *o-mikron*, 'little-*o*,' was conferred on the original o (=*ayin*). Into the 'western' alphabet the Ω never intruded: in its place stands Z, which at an earlier stage had dropped out between E and H, and was reintroduced, for Greek words only, when these came into use in Latin. Before this happened, however, the Y (=*u*) sign had been so far specialized, both in sound and in shape, to represent Latin *u* (=V)—though Y occurs in the oldest inscription from the Roman Forum—that there was need for a distinct sign for the lighter *u*-sound in Greek words, and a fully-formed Y (which the French still call *y-grec*) took its place before the other 'Greek' letter Z at the end of the list.

The Five-fold (Quinary) Grouping.—But why should the letters of the alphabet be arranged in groups of *five*, and why should care have been taken to make the signs in each *quintet* as distinct as possible in *sound* as well as in shape, while composing each quintet of one labial, one guttural, and so forth?

Now both in Phœnician and in Greek the letters were used not only as signs for sounds, but as signs for sequence or order, *i.e.* as *numerals*. We know that, both in Minoan, in Phœnician, and in Greek, a decimal system of numeration was in use, and that at the far end of the 'western' alphabets, Latin numerals subdivided the decade into two *pentads* or *quintets* I.II.III.IV.V : VI.VII.VIII.IX.X; marking 5 by a sign which is both (1) an abbreviated open-hand, (2) the leading sign in the fifth sign-group of the later alphabets, and (3) the upper half of the sign for 10 (X). Latin also had X for 10, representing (1) two five-signs ⋋ as above, and also (2) one of the supernumerary numerical signs (X) of the 'western' alphabets. This pental-grouping is not primitive Indo-European reckoning, where all the numerals from 1 to 10 have their proper names; it must therefore result from intercourse between Latin-speaking folk and some people which reckoned in *fives* as well as *tens*: and the only foreign peoples who had early intercourse with Latin-speaking folk were the Etruscans, the Phœnicians, and the Greeks. It was from the Chalcidian Greeks that Etruscans and Latins alike acquired their alphabets. A good example of the quinary system in Greece is the fifth-century Athenian notation for monetary values Ⅰ-Ⅱ-Ⅲ-ⅢⅠ-Γ (*pente*=5): Γ-ΓⅠ-ΓⅡ-ΓⅢ-ΓⅢⅠ-Δ (*deka*=10); followed by ΔΓ=15, Ⓟ=50 (10×5), and ΓΗ=500 (*hekaton*=100×5). The Latins certainly ac-

quired from the same source their signs for 100 (Ψ) and 1,000 (Φ written ⊏⊐ and confused with ⊃ the initial letter of *mille* the Latin word for 1,000); and they improved on their model by using half of Ψ (ψ) for $50=\frac{100}{2}$ and half of Ⓘ (Ⓓ) for $500=\frac{1,000}{2}$, just as they used half of X (ν) for $5=\frac{10}{2}$.

Greek Letters as Numerals.—Probably, therefore, in the numerical order of the Greek alphabets, we have the survival, only slightly disfigured, of an arithmetical notation, at first from 1 to 20 ($=\frac{100}{5}$) and later from 1 to 25 ($=\frac{100}{4}$); and that this alternative utility of the selected signs-for-sounds influenced the selection, determined the arrangement, and even prescribed also the composition of the fifth quintet following the new fifth vowel Υ; though when this happened the quinary notation itself was beginning to be superseded from π onwards, and the fifth quintet was never canonically completed.

The reason for the restriction of alphabetical numeration to the first decade seems to have been the same as for restricting the phonetic alphabet itself to 20 signs at an earlier stage, namely, the practical inconvenience of a larger number of signs among not very literate people. In the same way the linear script of the trans-Saharan caravan-traders of Ghadames, which remained in use until the nineteenth century, only survived in a select numerical series, which I saw in use in a warehouse in Tripoli as late as 1897. By altering the values of the Greek letter-numerals after the first ten (α—ι including $F=6$ written ⊏ in the fifth century and ϛ in Ptolemaic and Graeco-Roman papyri) and by making $\kappa=20$, $\lambda=30$, and so on, and similarly $\rho=100$ . . . the alphabet was enabled to represent all amounts up to 800; the lacuna after Ω=800 being filled with ϡ=900. At this stage all vestige of the old quinary system had disappeared except in the Latin numerals I-V-X, already mentioned.

AN ANCESTOR OF THE GAME OF 'LUDO.'

By G. Marin. Illustrated on pp. 116–17.

64 The games referred to in this note owe their origin to the practice of keeping a record of the successive throws of knucklebones, cowries, or other natural prototypes of the dice, by means of counters shifted along a row of stones, or a scale of lines, the length of which corresponds to the winning score. In the course of time the record-keeping part became the more important one, and some of the following characteristics were developed:

(1) The use, for each player, of more than one counter which he can use alternately, at his own discretion: this feature introduces the element of discrimination in a game, otherwise, of pure chance.

(2) The rule that when one player's counter lands in a place already occupied by an opponent's piece, the latter is sent back.

(3) The marking out of places of safety where such 'sending back' cannot take place.

(4) Other advantages and handicaps attached to special landing places.

This class of sedentary games must have made an early appearance, in warm countries; but in their primitive stage they could leave no lasting trace behind them, owing to the nature of the implements used. Soon, however, more permanent diagrams were occasionally incised in the flat surface of some conveniently situated rock or stone, so that they might serve repeatedly. The levelled rock or the broad slabs forming the floor of some cave-temple, or of some great public building, offering shelter from the tropical sun and the rain, formed an ideal ground for games to be permanently established, as is well known to tourists who have visited some of the ruined cities of Egypt, S. Europe, Syria, Persia, India, or China. Of the games there represented by rough diagrams of incised lines or of series of cup-like holes, many are still familiar—sometimes in a slightly modified form—to the present local population; the greater number belong to the mancala, draughts, morris, and other classes with which I shall not concern myself here.

The game I wish to speak about is one, of which I have found diagrams continually recurring among the ruined cities of Dravidian India, and which puzzled me for a long time, as

it seemed to have completely died out, so far as I could ascertain. It was not until I reached Ceylon that I found it still known to the present generation. Here it was called *pañca (kēliyo)*, *i.e.* '(game of) fives.' It was a simple form of the famous game of *pacisi* which Akbar used to play with human pawns in a courtyard of the Fort of Agra and at Fatehpur-Sikri, that national game of India which has spread through Persia and Arabia (*barjīs*) to N. Africa and to Spain (*parchīs*), and which was introduced more recently in England as *ludo*. In Ceylon the simple game of *pañca* was played with dice. In its usual form it has five 'houses of safety' formed by every fifth square, the 30th square being the goal (p. 116). We notice that the first section of the course is duplicated, each player having his own private track: this makes it impossible for counters to meet before they reach the fifth square.

It is interesting to compare this game to a still earlier form which seems to have been very popular, and also fashionable, in the Near East at a fairly remote period, viz. the so-called 'evil eye game,' specimens of which were found in Egypt, Palestine, Iraq, Cyprus, and Crete (fig. 2). It will be seen that here the houses of safety, which are marked by a rosette (perhaps an elaboration of the diagonal cross), recur every fourth square instead of every fifth. There is good reason to believe that, in other respects, this game was similar to the S. Indian game of *pañca*, both having developed the three first characteristics mentioned to begin with.

The fourth feature may well have been developed independently, on another off-shoot of the primitive counting-score, which has terminated in the 'snakes and ladders' type in India, and in the 'game of goose' type in W. Europe; games which have retained their pure speculatory character, each player being limited to the use of a single counter.

This kind of game seems to have combined with a member of the *pañca-pacisi* lineage, and given birth to the 'dogs and jackals game' of Ancient Egypt, also known on the shores of the Euphrates (p. 117). It was played with two sets of four pegs each along a series of holes after the fashion of our cribbage board. The holes of special significance are Nos. 6, 8, 10, 15, 20, 25, 30. We shall note that in the Egyptian specimen 6 is connected to 20 and 8 to 10 by curved lines, which seem to play the part of 'snakes' or of 'ladders.' An interesting feature in this game is that the progression is based on 'five' as in the Indian *pañca*.

ROYAL ANTHROPOLOGICAL INSTITUTE: PROCEEDINGS.

Socio-psychological Methods of Field-work. *Summary of a Communication by Dr. Marie Jahoda, 19 May, 1942.*

65 The war has greatly increased the demand for field-work in the social sciences. This urgent need for results has increased the quantity, though unfortunately not the quality of investigations. Therefore a critical examination of methods used in socio-psychological field-work is to-day of greater importance than a discussion of results.

Two types of investigation can be distinguished: those taking individuals, and those taking a detail of behaviour, as the units for investigation.

The first type is best approached by the method of participant observation, which has also been termed 'functional penetration.' The application of this method generally leads to descriptive results, based on which precise questions can be formulated, and methods devised which lead to precise answers.

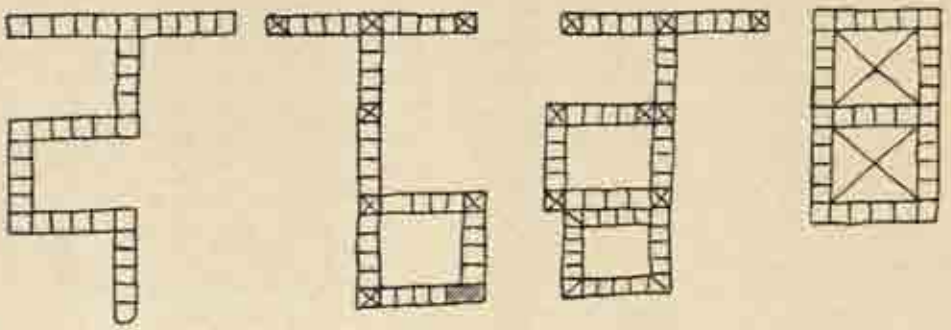
The second type of investigation is generally approached with statistical methods. Here the first methodical step is the application of a correct sampling procedure, which is, however, often neglected in current investigations. The next step consists of interviewing, or of the application of tests, attitude-measurements, and experiments. A particular difficulty in interviewing is the formulation of a motive question. Tests, attitude-measurements, and experiments are more suitable for the laboratory and the lecture-room than for application in the field.

All these techniques are, however, liable to produce false results, unless the natural bias of the investigator is considered and controlled as far as is possible.

Although a certain scepticism is justified in respect of the development of methods in socio-psychological field-work, a cautious application of the available techniques enables the social psychologist to contribute to the understanding and the solution of the human problems of our civilization.

GAMES OF PAÑCA

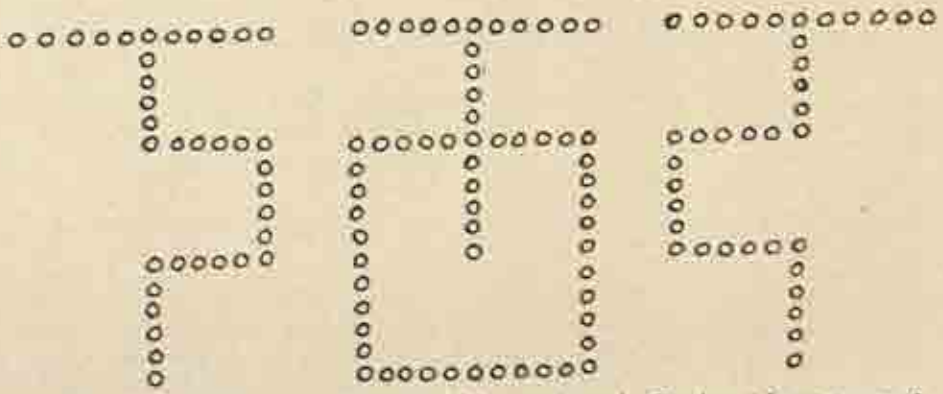
Tamil examples



Mahabalipuram (usual type)

Mahabalipuram (single specimens)

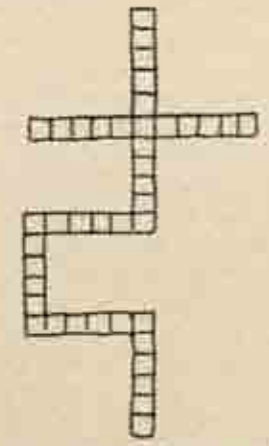
Kanarese examples



Vijayanagar

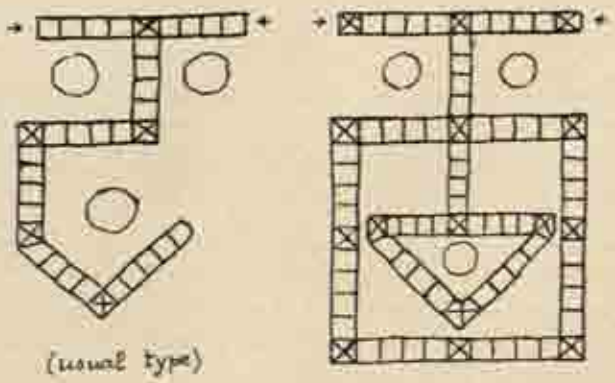
Badami (2 specimens)

Badami (2 specimens)



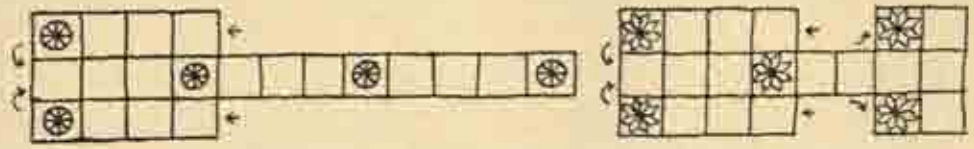
Śravaṇabelgula (2 spec.) and Vijayanagar

Singhalese examples



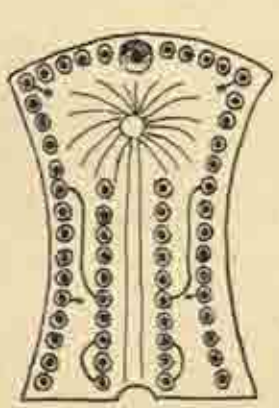
(usual type)

DIAGRAMS OF THE «EVIL EYE» GAME

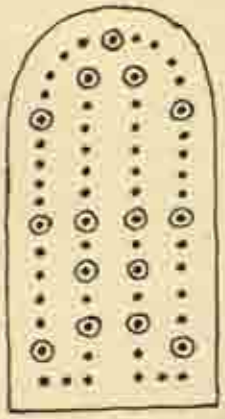


Egyptian type Sumerian type

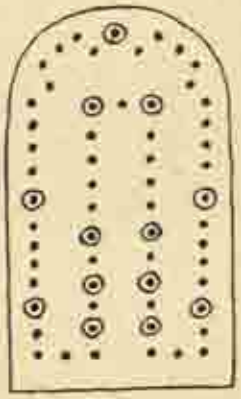
DIAGRAMS OF THE «DOGS AND JACKALS» GAME



From Earl of Carnarvon & H. Carter: "Five Years' Exploration at Thebes"



Baghdad Museum nº 17876.



Istanbul. Mus. Eski Şark nº 4065

PROCEEDINGS OF INSTITUTIONS.

University of the Witwatersrand, Johannesburg.

66 The following letter from Professor C. van Riet Lowe, Director of the S.A. Bureau of Archaeology, will give pleasure to the many friends both of him and of the Abbé Breuil:—

'You will, I feel sure, be extremely interested to 'know that the Abbé Breuil will soon join my staff 'in Johannesburg. The entire story is too long 'and too complicated to tell you in detail, but the 'main points are: (1) the Abbé will come out at the 'expense and as the guest of our Government. Our 'great leader and Prime Minister supported an 'appeal from me, and the Abbé will join my staff 'soon after July. (2) The University here unani-'mously accepted my recommendation to appoint 'the Abbé to an Honorary Professorship in the 'Department of Archaeology at the University. As 'I occupy the Chair, we could do no more—but 'the Abbé will have a seat on Senate and therefore 'full academic status.

'What an honour to us and what a privilege to have 'him in our midst! He will virtually take my place 'while I am so steeped in military and other duties.

'"I do not want life," says the Abbé, "I want '"work"—and I can give him plenty. "If I '"finish my life in South Africa, my fate should not '"be so bad, as I am very fond of the country and '"there is so much work to do for science with '"your direction and friendship, and the friendship '"of others whom I met nearly twenty years ago—'"of which I am proud to count your great name, '"Field Marshal Smuts."

'It is pleasant in these stressful times to get a 'glimpse of the more constructive side of life—of the 'essential goodness of human nature at peace, as 'well as of the quiet yet deliberate selfless service 'of such great men as are Smuts and the Abbé. 'Our friends in Great Britain will, I am sure, be 'most interested and all archaeologists should be 'grateful for the move.'

REVIEWS.

ARCHÆOLOGY.

67 **Two Celtic Waves in Spain.** *By P. Bosch Gimpera. The Sir John Rhŷs Memorial Lecture, 1939. From Proceedings of the British Academy, XXVI. London (Humphrey Milford), 1942. 8vo. 1–126 pp., I–IV maps, and I–VI plates. Price* 8s. 6d. *net.*

It has perhaps too often been forgotten what an important part of ancient Celtic Europe lay in Spain. In fact, the main wave of Celtic immigration across the Pyrenees was a major event in the history of the European Iron Age: it consisted of three component movements, in the seventh and sixth centuries B.C., and was, moreover, preceded by an earlier wave, affecting only Catalonia, at least as far back as the tenth century. It is extremely welcome to be given an authoritative summary of this whole subject in English, and by the man who until the fall of his city and Government was doing more than anyone else to make the pre-Roman archaeology of the Peninsula an integral part of the modern movement to establish European prehistory on a scientific basis. Between his arrival in England from Barcelona and his more recent departure for Latin America, Dr. Bosch Gimpera devoted many months to the composing of this lecture and its preparation for the press, which has thereafter been completed by Professor Myres. The six plates give a good photographic type-series of the pottery which forms so much of the archaeological evidence, and some weapons and ornaments also; the four maps are the author's own, and illustrate graphically his thesis that by a correlation of archaeological and place-name distributions with the known geography of ancient Celtic tribe-names, it is possible not only to expound the formation of Celtic Spain, but to use the Spanish evidence to carry back the antiquity of Celtic tribal nomenclature deep into the Hallstatt period of the Celtic homelands in West-central Europe. His bibliography takes account of virtually all the relevant matter published up to November, 1939, when the lecture was delivered, and he also records a great deal of unpublished archaeological material known to him in Spain, Portugal, France, and elsewhere, much of which may now itself be irretrievable.

The first Celtic wave into Spain was one of migrants of the Urnfield or 'Hallstatt A' culture-area of South-west Germany, who passed from the Rhine to the Rhône and so into Catalonia not later than 900 B.C. Their origin is manifest in their unmistakable sepulchral urns, and they also seem to be responsible for a number of unmistakable Celtic place-names. For Catalonia was almost wholly untouched by the second Celtic wave, which arrived when it and also the adjacent part of southern France had fallen to the Iberians of the coast-lands farther south, and there are thus no other Celts to whom the place-names can be ascribed. This argues the Celticity of Urnfielders in South-west Germany whence these migrants came, and is thus an important contribution to establishing the antiquity of Celtic speech and culture on the Continent.

The second wave is more complex, and its three component movements all entered Spain by the western or Biscayan end of the Pyrenees. The first corresponds to the 'Hallstatt C' culture of Germany and east France, comprising Urnfield survivals. It began in time to reach North-central Spain about, or perhaps rather after, the middle of the seventh century B.C., after settling large parts of Central France. The second movement followed, from rather more northerly origins in West Germany, and spread to North-west Spain, parts of Portugal, and the fringes of Andalusia. The third, coming in the sixth century from what was later known as Belgic Gaul, passed across an already settled Central France to North and North-central Spain. Both the last two movements brought to the Peninsula Celtic tribe-names known also in their homelands (*e.g.* Turones, Ambiani, Suessiones), and even some (*e.g.* Paemani, Eburones) from the fringes of the Germanic world which exerted most of the pressure that set these Celts in motion. The whole wave had arrived in Spain before the rise of the La Tène culture, which there was no later movement to carry there, so that the antiquity of these tribe-names is taken reliably back to the earlier half of the first millennium. The author shows that the same must be true of many of the Celtic tribe-names in France, where Celtic settlement, as Ward-Perkins has independently shown (*Arch. Journ. XCVII*), was the work not of the La Tène period, but of the Hallstatt period before it.

Thus he is able not only to give a coherent archaeological account of the composition of these Hallstatt migrants, but for the first time to distribute tribe-names as authentic labels among many regional groups of archaeologically recognized Hallstatt culture. His archaeological account of the complexities of the crucial West German territory is always ingenious and often brilliant, though details like the attempted synchronisms with movements into Britain should not be unduly pressed, and the picture in and around the Low Countries will be clearer for the publication of an exhaustive paper by Rusch which the war has withheld from us. As for his exposition of the Spanish culture-groups and their sequence, it will be new to most English readers, and is both clear and written with authority. The synthesis of archaeology and tribe-names is a departure of the first importance. It may perhaps over-reach itself in places—*e.g.* the group-name 'Belgic' is not proved to be of Hallstatt age by proving this for the names of individual tribes later grouped as 'Belgic' in their homeland—but it remains the most serious attempt yet made to carry back the tribe-names of the Celts into their prehistoric past, and this alone makes the lecture a landmark in Celtic studies. It should be read by all who would like to see the same method further applied in the British Isles, and for its own sake by all who are interested in the archaeology, language, social structure, and geographical expansion of the Celtic peoples, and in the history and anthropology of Spain.

C. F. C. HAWKES.

68 **Dating Prehistoric Ruins by Tree Rings.** *By W. S. Stallings, Jr. Laboratory of Anthropology General Series, Bulletin No. 8. Santa Fé, New Mexico, 1939. 20 pp., illustrated. Price 50 cents.*

This is an admirable exposition of a subject which has made rapid progress in recent years and been successfully applied in combination with ceramic and stratigraphical evidence on sites in the south-west of U.S.A., where timbers are frequently preserved on prehistoric sites. The method is simple. The width of the annual ring grown each year by certain trees reflects essentially the amount of moisture received in that season. The patterns or sequences of such rings can be recognized in tree after tree; and by comparing older timbers with later and matching their ring-patterns, the series of years can be prolonged, and confirmed as material

becomes available; and the area of similar variations of climate can be delimited. Only certain species give satisfactory patterns, but the patterns are preserved in charcoal and partly burned timber.

In the south-west the tree-chronology has now been carried back to A.D. 11; in the Rio Grande area to A.D. 930, in the long-lived sequoias of California to 1305 B.C. This is a good record for a method which was first applied by Dr. A. E. Douglass only in 1901.

J. L. M.

CORRESPONDENCE.

Further Excavations in Manitoulin District, Ontario.

69 *Cf.* MAN, 1941, 56.

SIR,—In the summer of 1941 further excavation was carried out on a site near Killarney, in Manitoulin District, Ontario, which has all the appearance of being contemporary with the formation of the post-glacial raised beach upon which it lies, 297 feet above the present level of Lake Huron and about five miles inland. The second field-season on this site has not changed the typology, as described in MAN, 1941, 56.

Perhaps the most important result of the summer's work was the discovery of a similar site half a mile to the west on another raised beach, although a less extensive and definite one than the first. The elevation was taken with a defective level, but it is apparently some thirty feet higher, around 327 feet. The typology at this second site is the same as that of the first, if the six specimens collected from the surface are representative, but no water-worn specimens have yet been found. Both sites are near a small lake, the shore of which is about 800 feet south of the first site and 2,000 feet east of the second. The lake is nearly a mile long and a quarter of a mile wide, and its surface is 208 feet above Lake Huron. The southern rim is a rock sill which is too low for its waters ever to have reached either raised beach.

Between each of these sites and the nearest portion of the shore of the lake, a few artefacts and flakes of quartzite are found on the surface to within ten feet of the lake shore and three feet above its surface. The explanation seems to be transportation by surface water, particularly in spring freshets when a great quantity of snow melts in heavy rains. None of the artefacts found under such conditions has a rolled or worn appearance, but all show the effects of battering. Their surfaces are flecked with light-coloured spots where battering has made a fracture slightly beneath the surface without the detachment of any material. The surface waters which transported and battered these artefacts cut deep gullies through both sites and between them and the shore of the small lake. The artefacts themselves are found in the gullies and between their mouths and the lake shore where the gradient is low, about one in one hundred feet. These low areas are alluvial deposits showing channelling by the most recent freshets, and it is in and on the edges of these channels, as well as in the gullies, that the transported artefacts are found. After photographing, most of the artefacts were left in place in order that changes in position may be observed next summer. The transported materials from the two sites approach to within about 500 feet of one another, though the sites from which they came are about half a mile apart. This condition is unmistakably of topographical origin.

There are now four sites within seven miles of Killarney, three of which are contemporary with the waters of the Great Lakes at their respective levels—28, 56, and 297 feet (for the first two, *see American Antiquity*, Vol. 6, April, 1941, pp. 305–313), and the fourth, at about 327 feet, will probably show contemporaneity. The typology of these sites is strikingly consistent with their elevations above Lake Huron, and the correlative antiquity. Sites comparable to those at 297 and 327 feet do not occur on Manitoulin Island, which was submerged for the most part at those stages of the Great Lakes.

On the basis of the work done in the Manitoulin District since 1938 the sequence begins with an early historic cemetery which was in all probability Ojibway and thus related to the present Indians of the region. This cemetery, excavated in 1938, is dated around 1750. The nearest to it in time is the site at the 28-foot level near Killarney, 20 miles distant, dated by geological means roughly at A.D. 500. The dates of the other two sites near Killarney, at 56 and 297 feet, are estimated by Dr. George Stanley at 600 B.C. and 1400 B.C. The site at an elevation of 327 feet will be given an antiquity corresponding to the elevation when it shows contemporaneity with the Lakes at that level. There are a few features that suggest relationship between the sites at 28 feet and 56 feet, but possible connexions between the others await discovery of sites at intermediate elevations, and the chances for that are good, since the post-glacial tilt has an area of several thousand square miles.

The antiquity assigned to the site at an elevation of 297 feet rests entirely upon the presence of artefacts and flakes that have been worn by a natural agency, and that agency is taken to be the action of the waves of Lake Huron which formed the beach upon and in which the materials are found. The site exhibits other features which are consistent with the antiquity assigned by geological means, and the culture is not found elsewhere at lower levels in the entire region. By comparison with others in the New World the culture is early.

The two sites at the highest elevations are rather difficult of access, and so far daily trips involving about three hours going and coming have been made to them from a base camp. The bush is thick at both places, particularly on the site discovered during the past summer, and some of this must be cleared before contour maps can be made.

E. F. GREENMAN.

Ann Arbor, Michigan.

Are the Australian Aborigines Ignorant of Physiological Maternity?

70 SIR,—In my book *Coming Into Being Among the Australian Aborigines* (London, 1937), I suggested that an analysis of the evidence strongly indicated that the Australian aborigines were ignorant of physiological maternity as well as of physiological paternity.

Some students of Australian ethnology found this suggestion 'fantastic.' For a reply to these critics, *see* M. F. Ashley Montagu, 'Ignorance of Physiological Maternity in Australia,' *Oceania*, xii, 1941, 75–78; 'Nescience, Science, and Psycho-Analysis,' *Brit. Journ. Med. Psychology*, xviii, 1941, 383–404.

Others felt that it would be worth checking in the

field. The first attempt at such a check has now become available, and I should like to bring it to the attention of interested students for what it is worth.

Writing on the Adnjamatana tribe of northern South Australia, whom they investigated during the years 1938–1939, C. P. Mountford and A. Harvey, 'Women of the Adnjamatana Tribe of the Northern Flinders Ranges, South Australia,' *Oceania*, xii, 1941, 156, have this to say :—

'The Adnjamatana . . . appear to have had no 'knowledge of physical paternity before the coming of 'the white man, and certain features of Adnjamatana 'theory . . . suggest also the non-recognition of physio-'logical maternity.'

The evidence which Mountford and Harvey cite (*l.c.*, 159–160) in support of this suggestion is as follows : first, the spirit child which enters the woman is already 'an existent, complete and self-directing being that 'originated from a super-earthly source. It is able to 'find its own food and shelter. It also has the ability to 'choose for itself an earthly mother, and exercises 'freedom of choice among the women, subject only to 'the moiety rules. Stress is laid on the spirits' liking 'for fat and comely women. The second belief is that 'the *muri* (the spirit child) is independent of the mother 'during the period of gestation, this being indicated by 'the statement that after birth, it still has sufficient 'supplies of *amaruka* (spirit child food-fruit of the Jas-'minum lineare) to sustain it for a period of equivalent 'to eight hours before suckling takes place.'

Apparently the idea of physiological maternity is not as fantastic to an Australian aboriginal and to some interpreters of his procreative beliefs, as it is to some who, it may be suggested, have not studied the evidence as critically as it deserves.

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Cowry, Vulva, Eye. *Cf.* MAN, 1940, 20, *and index* ; 1941, 13, *and index*.

71 SIR,—I understand Dr. Murray's views on the cowry shell to be as follows :—

1. It is used to represent an eye.
2. It is used as a charm against the power of the Evil Eye.
3. It does not represent the human vulva.
4. It is not used as a fertility charm.

That the cowry shell is used to represent eyes is not disputed ; that it is used as a charm against the evil eye is also not disputed. I myself have not come across the belief in the evil eye nor the use of the cowry shell as a charm against it. I have come across the cowry as symbolic of the vulva and as a fertility charm.

If the second exposition is a correct interpretation of Dr. Murray's viewpoint, then in a tribe where both the belief in the power of the evil eye and the use of cowries are found, the cowry shell ought to figure as a charm against the power of the evil eye. A. J. N. Tremearne (*The Tailed Head-Hunters of Nigeria*, London, 1912) mentions the use of cowries as money in Northern Nigeria ; he also mentions the belief in the evil eye, but he makes no mention of the use of the cowry as a protection against the evil eye.

'Hausa women use white and even yellow earth on 'their faces, especially to mark rings round their eyes 'to keep off the evil eyes' (p. 131).

One instance, such as the above is, may be explained away, but when there are others then finding explanations becomes difficult.

The cowry is used, among other purposes, by the Nandi of East Africa for decorating the girdles of young girls. The belief in the power of the evil eye is also found.

'The Nandi believe that certain people have the 'power of causing children and calves to fall ill, and 'pregnant women and cows to abort when they regard 'them. Such persons are called *sakutik*, and when-'ever a man or a woman has the reputation of being 'possessed of the evil eye, he or she must spit if they 'see a person or animal approaching them who might 'be harmed by contact with them. Children and 'calves who are supposed to be particularly susceptible 'to the powers of the *sakutik* wear a necklace of the 'seeds called *lapsomik*.' (A. C. Hollis : *The Nandi*, Oxford, 1909, p. 90.)

It is strange that the Nandi have not stumbled on Dr. Murray's idea that the cowry represents an eye and on the principles of sympathetic magic have not used it as a protection against the power of the evil eye.

This second instance is more damaging to Dr. Murray's point of view, but worse is to follow.

Sir Grafton Elliot-Smith showed (1) that the pig was identified with the Great Mother ; (2) that the cowry was also identified with her and called *porcellus* from *porcus* (pig) ; (3) that the cowry symbolized the human vulva. (*The Evolution of the Dragon*, London, 1919, pp. 219–221 ; quoted MAN, 1941, 39.) The moon, either crescent or full, was another symbol of the Great Mother.

Let us see what these same Nandi make of Sir Grafton Elliot-Smith's idea. Marriage is the centre of fertility cults. The following extract describes part of a Nandi wedding ceremony :—

'The bride having been freshly oiled, shaved, and 'dressed in the *kiskisto* and *surict* (the *surict* head-'dress is made of leather and iron wire and is orna-'mented with chains and cowry shells ; a pair of 'wart-hog tusks in the shape of a crescent is bound 'to the front of the head-dress if the girl is a virgin) '. . . enters the house by the front door.' (Hollis, *l.c.*, p. 62.)

Marriage is essentially a fertility rite and the essential symbols found here are : cowry shells, the pig, the crescent on the virgin brow ; a better vindication of Sir Grafton Elliot-Smith's conclusions than those of Dr. Murray.

I have now started to collect information on the cowry as a symbol of the Great Mother and have already amassed a considerable body of new information, with more striking examples in support of 'cowry = vulva,' but photographs are necessary and at present I cannot obtain films. When I have (*a*) the time, (*b*) the photographs, I will publish the information collected.

With reference to the photograph of the warrior's head-dress given in MAN, 1940, 188, with the remark that he would not go into battle decorated with feminine symbols, Dr. Murray does not say what the cowries symbolize. In the absence of any explanation I offer the following.

In battle the great risk is Death : the opposite to Death is Life. Cowry shell = vulva = symbol of life ; hence to face Death successfully one must have abundance of life. On the principles of sympathetic magic, an abundance of the symbols of life, cowry shells, means an abundance of life ; just as the multitudinous breasts on some Indian goddesses indicate an abundance of life. There may be a better explanation ; if there is, let us have it.

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FIG. 1.—DHULIA YOUTH WITH VERY OLD COWRIE JACKET, COME TO DANCE AT A MANDLA WEDDING

FIG. 2.—DHULIA BOY WITH VERY OLD COWRIE BRACELETS, ARMLETS, AND BELT, COME FROM BHILASPUR TO DANCE AT A MANDLA WEDDING

FIG. 3.—MURIA BOY OF NORTH-EAST BASTAR, WEARING COWRIE JACKET AT A WEDDING

FIG. 4.—MURIA GIRLS OF THE ABUJHMAR FOOTHILLS, BASTAR, WITH BUNCHES OF COWRIES IN THEIR HAIR

COWRIES AS ORNAMENTS IN BASTAR STATE.

MAN

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ORIGINAL ARTICLES

THE USE OF COWRIES IN BASTAR STATE, INDIA. *By Verrier Elwin, Hon. Ethnographer, Bastar State; Extracted from a letter to Dr. Margaret A. Murray, Cambridge. Illustrated.*

72 In Bastar the cowrie is still extensively used for decoration, as a charm, for ritual purposes and in gambling. Not long ago I saw cowries being sold in the Palmar bazaar (Dantewara Tehsil). There are still many of the older generation who remember the days when the cowrie was used as currency and was accepted for the payment of taxes.

The cowrie is used as a charm against the Evil Eye, though I have not found anyone who regards it as representing or even resembling the human eye. Necklaces of cowries combined with small twigs of *Semecarpus anacardium, Linn.* are tied round the necks of babies or on any injured or painful part of the body. A cowrie is often strung round the necks of animals to protect them, and more especially the Banjara gypsies decorate their gelded bullocks which have to travel abroad and may thus easily meet hostile magic on the way.

Among the Hindus and Hinduised aboriginals there is a special association with the Evil Eye: but among the wilder aboriginals the cowrie is regarded simply as a useful charm which may be effective in preventing or even curing disease. At Mokhpal (Dantewara Tehsil) I was told by the Bison-Horn Marias that they offered cowries to any *Rau* which troubled them, and that when a man was very ill and unable to eat, the local magician waved a cowrie round his head seven times. In the Durwa country I found a custom of offering five cowries at the village boundary, with rice and flowers in a small bamboo litter, at the end of a small-pox epidemic in order to purify the village of whatever evil spirits were troubling it. Sometimes a cowrie is tied to a shoe and hung up on a tree outside the village with the same purpose. The Bastar evidence, therefore, seems to suggest that the cowrie is a useful protection against evil spirits (which are the usual source of disease), but is not specially associated with prophylaxis against the Evil Eye.

Do any of the Bastar aboriginals associate the cowrie with the vulva? If they did, we should expect to find the cowrie used in this sense in their riddles. But neither in Bastar, nor in my collection of Gond, Baiga, Agaria, and Pardhan riddles, from the Central Provinces, have I found a single reference to the cowrie, though there are many symbols used for the female genitalia. None of these peoples, in fact, think that the cowrie looks like the vulva. The Murias of Bastar often make representations of the vulva on their tobacco-pouches, on wooden head-rests used in the village dormitory, on the pillars of the dormitories and the shrines of the gods, on combs given to girls, on the sheaths of knives, and sometimes on tree trunks in the forest (fig. 5). The Baigas do the same on trees, and I have three curious pillars made by a Gond of Mandla (apparently simply for amusement) which show different types of breast and vulva. In every one of these (in Mandla or Bastar) the shape given to the vulva is unlike that suggested by the slit of the cowrie. It is illustrated in fig. 6.

In very small carvings on tobacco pouches the clitoris is omitted, but otherwise it is always present and sometimes even a double clitoris is shown. Another point that causes the aboriginal of central India to fail to recognize the vulva in the cowrie is that they almost always insist on the depilation of the pubic hairs. It is only in witches and women who possess the dreaded (and mythical) *vagina dentata* that retain their pubic hairs. The cowrie therefore would be the symbol of something dangerous and abnormal, if it was connected with the vulva.

The Murias, however, seem to have no objection to handling representations of the vulva on their tobacco-pouches and combs.

The cowrie is chiefly used in Bastar as an ornament. The attractive cowrie belt is very common. I do not agree with Grigson (MAN, 1940, 187) that it is dying out. The cowrie ornamentation of the bison-horn dancing head-dress is usually made by Banjara women (fig. 7) and purchased from them by the Marias. This head-dress (fig. 9) is usually worn at wedding dances and the cowries may serve some additional magic purpose. Cowries are used to decorate, sometimes, the dancing shield of the Hill Marias. In the elaborate and delightful festal dress of the boys among the Murias of the Abujhmar foothills large numbers of cowries are used. Strings of them hang as streamers from the head-dress (fig. 8); other streamers depend from the ornamented and horned sticks carried over the boys' shoulders at a festival. They hang in little bunches with bells from the waist; they form part of the bead necklaces. Girls wear great bunches of cowries in the hair (Pl. F, 4). Near Kondagaon, Muria girls use cymbals attached to each other by long double strings of cowries.

FIG. 5.—VULVA CARVED ON A TREE-TRUNK, PROBABLY BY A BAIGA, IN THE FOREST NEAR SAMWACHAPAR, MANDLA DISTRICT; IT HAS NO RESEMBLANCE TO A COWRIE

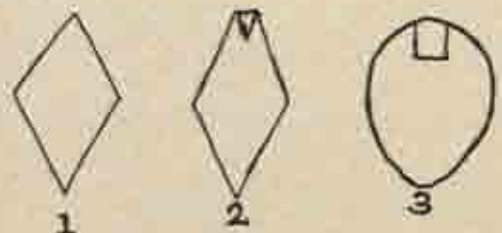


FIG. 6.—TYPES OF VULVA ORNAMENTS

On the whole, however, the cowrie is much more common as a male adornment, and married women never wear the bunches of cowries in their hair. In North Bastar I have seen the cowrie jacket worn by male Muria dancers at weddings (Pl. F, 3), and in Manilla and Sarangarh State I have seen Dhulias and Pankas wearing the cowrie jacket, cowrie bracelets, cowrie armlets and cowrie belts (Pl. F, 1, 2). These decorations were again chiefly for use at weddings, occasions when special care has to be exercised against witches and warlocks.

The ritual use of the cowrie in Bastar is interesting. Either at an engagement, or during the marriage ceremony, a number of cowries (varying according to the clan) is given to a Muria girl's parents to be placed in the 'Pot of the Departed' in token of the fact that she has now left the clan of her ancestors and joined that of her husband. In the old days, the bridegroom used to give a handful of cowries to the village dormitory in which his bride used to live. The curious Anga Deo, or clan-gods of the Murias, are often tied up with a few cowries, and in the Muria village of Masora I recently saw the magician's chair and the litter of Danteshwari Mata, both decorated with cowries. Where there is a supply of cowries available, most of the Bastar aboriginals throw a handful into the grave. Last year I witnessed a Muria funeral near the Abujhmar Mountains when cowries were tied on either side of the cloth that covered the corpse. At a Muria Festival of the eating of the new mangoes, I saw the headman place an offering of a ring and a cowrie by the roadside, in order that the soul of his father, who

FIG. 7.—BANJARA WOMAN OF DANTEWARA TEHSIL, BASTAR, MAKING COWRIE DECORATIONS FOR THE MURIA DANCING HEAD-DRESS

FIG. 8.—STREAMERS OF COWRIES WORN BY MURIA DANCERS AT A FESTIVAL NEAR THE ABUJHMAR HILLS

had died since the previous festival, might go safely to join his ancestors. In parts of Bastar, pice are now used instead of cowries, suggesting that the real meaning of the rite was simply to provide the dead with money for their journey.

The cowrie is associated in Bastar with divination. The *siraha*-mediums among the Murias and Dhurwas and Marias of Dantewara (where I have recorded it (fig. 10) and no doubt elsewhere), use old coloured Banjara jackets liberally decorated with cowries when they are intending to fall into trance and interpret the will of the gods. I have seen these jackets on sale in the bazaar, and purchased one myself without difficulty. It may be noted that the cowrie jacket worn for divination is a woman's jacket.

At Muria weddings in the south of the Jagdalpur Tehsil (so I am told by Mr. A. N. Mitchell, I.C.S.), 'a heap of cowries is placed before the 'bride and bridegroom, and the bride and groom 'each take up a handful. These cowries are then 'counted. If two cowries are picked up by either 'couple, it is considered to be a sign that they will 'quarrel and not live happily. If three are 'picked up, it is a sign that the bride will marry a 'second time; if four or five are picked up, it is 'believed that the couple will live happily. If 'both bride and bridegroom pick up the same 'number of cowries, this is regarded as double 'evidence of what the individual numbers indicate, 'but if they pick up different numbers it is 'supposed to mean that one or the other will die, 'or that they will separate or remarry.'

I will briefly notice a few other uses of the cowrie. To the Hindus of Bastar, and no doubt elsewhere, the cowrie is associated with the goddess of wealth, Mahalakshmi. A cowrie is often printed at the foot of pictures of this goddess and at Divali the worshippers of Lakshmi gamble with cowries as counters. Mr. Ghasiram Dani tells me that in some Hindu marriages bride and bridegroom gamble with cowries and that the shell is always useful to the professional gambler.

In the south-west of the State, I am told, the villagers burn cowries in order to convert them into lime, which they mix with the tobacco they eat.

In a bazaar in Sarangarh State, I saw cowries attached to the end of the long strings which held

FIG. 9.—MARIA OF DANTEWARA TEHSIL, BASTAR, WITH BISON HORN DANCING-HEADDRESS, DECORATED WITH STRINGS OF COWRIES

FIG. 10.—SIYARA MEDIUM, A MURIA OF BASTAR, WEARING COWRIE-JACKET AT A TIME OF DIVINATION

fighting *maina* birds. These birds were made to fight and bets were taken on the result. The cowries may either have been to ensure good luck or they may simply have been a convenient way of holding the end of the string.

In Bastar, I conclude, the cowrie is certainly not regarded as a representation of the vulva nor as a fertility charm, it does not even appear to be specially directed against the Evil Eye. But its association with the currency, its growing rarity and importance as a symbol of old time, its connexion with the Banjara gypsies, have given it in the eyes of Maria and Muria, Dhurwa and Bhattra, the significance of a magic charm which is also very useful as an ornament. The cowrie decorations worn by a Dhulia at a wedding in Mandla and Bilaspur are not only valuable because they make the wearer attractive but they may also save him from the supernatural perils that may attack those who take part in such occasions.

RACE, PREHISTORY, AND EUROPEAN CIVILIZATION.

Contribution to a Symposium on 'The Scientific Attitude to Fascism, with special reference to Racial Theories' arranged by the Marx House Faculty of Science, London, April 6, 1942.

By C. F. C. Hawkes, M.A., F.S.A.

73 Human beings express their gregarious impulse in a wide range of group feeling, with associations extending outwards from the family or kinship group. In modern Europe such group feeling has come, or has been brought, to express itself in the particular form of nationalism—a politically specialized extension of tribal or clan feeling, itself an extension of kin or family feeling, and so carrying some sort of belief, whether specific or vague, in a common ancestry. Precisely what the common ancestry goes back to is not a question that exercises the popular mind very much when left to itself: it is just a background, assumed, or taken as implied, in the existence of the nation. The foreground of popular belief in this connexion is much more concerned with the *cultural* inheritance—language, institutions, behaviour, and material culture. But the popular mind is not left to itself by nationalist propaganda, which seeks to intensify all this sort of feeling, both as regards culture and ancestry, by disseminating specific beliefs about the nation's past, both biological and cultural, conjoined in doctrines of race, really theoretical, but purporting to be guaranteed by appropriate branches of learning.

One of these is Prehistory. Its main instrument for extending the tale told by written history backward in time is archaeology: that is, the recovery and comparative study of material remains, in particular by grouping these as evidence for distinctive cultures, with a definite extension in space as well as time, and a definite intension in the social and economic field. These remains may include the physical remains of the ancient people themselves, and here the archaeologist gives the physical anthropologist and the biologist a cultural and historic context for their particular studies. The distributions of prehistoric types of man may sometimes be more clear-cut than those of types living to-day, which cannot be separated by precise racial boundaries corresponding with, or resembling, national frontiers or language-divisions. But nationalist racial theory exaggerates that fact by making out that race-boundaries of this precise kind did formerly exist, and expounds the past of the races thereby distinguished in nationalistic terms. This is to beg the whole prehistoric question.

Prehistory must first aim at the recognition of culturally homogeneous groups or cultures, defining them in time, space, and character. Its archaeological record thus makes an extension of history, and this extension is valid because the group distinctiveness expressed in material culture is of more than merely material significance.

The determining factor in human history being basically the production and reproduction of the essentials of life, the historic process consists in the interaction between human society and its environment, in which society has achieved progress on the one hand by developing a material culture based originally on tools, and on the other by the procreation of human social groups based originally on kinship. The solidarity of these groups will have been cemented by their group feeling, which at the same time will have expressed itself materially in distinctive group methods of producing the essentials of life—in other words, in distinctive material culture amenable to study by archaeology. Thus cultural distinctiveness is the social and economic expression of group feeling.

Now it would be absurd to assume that the ancestral kinship idea inhering in that feeling must be devoid of all biological validity, or that culture has nothing to do with what is loosely known as race. As races evolve, so cultures develop, by isolation and mixture. Cultural distinctiveness must embody distinctive factors of habitat, economy, and social structure, and these same factors have operated in the evolution of races. But the biological and the cultural processes are of course different from each other in nature and in method and rate of operation, and owing to the mutual fertility and the spatial mobility of the human species engaged in both, the historic realities are much more complex than the artificial simplicity of their falsification by nationalism.

The stock example of this falsification to-day is German race-history, as adopted and exploited by the Nazis. The mid-nineteenth century had taught that the Aryan family of languages descend from the speech of a primitive Aryan race, which was later identified with the blond, long-headed 'Nordic' race, understood to

be domiciled mainly in Northern Europe. The nineteenth century had also become aware of the remarkable wealth of part of Northern Europe, in particular the W. Baltic and N. German region, in archæological remains of Stone Age cultures, sometimes associated with skeletal remains regarded as of 'Nordic' type. In general, moreover, it believed that all Stone Age remains must be absolutely earlier than all Metal Age remains, just because the tools were made of stone and not metal. Combining these various notions, the Berlin professor Gustaf Kossinna proclaimed that a pure Nordic race, speaking an ancestral Aryan language, had settled in the W. Baltic regions as soon as these emerged from the Ice Age, and thence in the later Stone Age spread out and supplied the whole of the Old World with its main momentum of civilization and progress. What account can now be given of this matter by Prehistory?

Our civilization is founded on the change—in effect a revolution—from food-gathering, hunting and collecting, to food-producing by agriculture and stock-farming. This was first achieved somewhere in S. W. Asia between 6,000 and 5,000 B.C., and was the work of what may loosely be called the White Race, and specifically of what has become known as the Mediterranean race, in the wide sense of the term. This sort of humanity, which is characteristically long-headed, was descended from an ancestral strain of which much more ancient representatives are known in Europe, in the earlier part of the Old Stone Age, or Palæolithic. But later in that Age Europe had come to be inhabited by men showing a range of differentiation, probably with mixture from another strain. Very broadly speaking, in West-Central and Western Europe there then lived a group in the main more differentiated, which had arrived first, while East-Central and Eastern Europe were inhabited by a less differentiated group, which had arrived later, from the east, and were closer to the main ancestral stem, showing some of the tendency to broad-headedness which appears in the other group, yet forming with it a single range or series. The Palæolithic period was marked by great Ice Ages: through the last series of these our Late Palæolithic men lived, and when the ice finally retreated northward, groups of them followed it, hunting the reindeer and other arctic game as they were accustomed. This was about 12,000 B.C.

The Mesolithic or Middle Stone Age followed. It was still an age of hunting or food-gathering, and from it the revolutionary transition to civilization was begun in S. W. Asia between 6,000 and 5,000 B.C. Nothing of the kind happened then in Europe, and the W. Baltic region of the European North, including N. Germany and S. Scandinavia, was inhabited by descendants of the Late Palæolithic people, broad-headed and long-headed overlapping, but the broad-headed tending to a more westerly distribution, the long-headed to one more easterly. In culture, however, there was now no corresponding distinction there, and the whole Baltic region was characterized by a single almost uniform Mesolithic culture, of hunting and fishing economy, the so-called Maglemose culture. Thus already a partial disharmony is apparent between racial and cultural groupings in Europe.

But then the old European Mesolithic of which this culture formed part was invaded by the Asiatic and African Mesolithic, which thus encroached and in part imposed itself upon it. The invading cultures, the Tardenoisian, came by two routes, in the west from Africa by the Straits of Gibraltar, and in the east from Asia past the Caspian and the Black Sea. Their bearers are not known from many skeletal specimens, but there are enough to show that the Western group brought in a Mediterranean strain representing the culture's originators, though other elements were also present; while the Eastern or Black-Sea group were probably Mediterraneans also, though breeding, as we shall see, more than one type. Culturally, the Eastern Tardenoisian appears absolutely uniform in its known material, which consists mainly of distinctive small flint implements, from the Crimea and the Black Sea across to the N. German region bordering on the Baltic. It occupied in fact the great belt of open steppe and dune country between the Eurasiatic mountain zone on the south-west and the Russian forests on the north-east, touching at one end S. W. Asia, the cradle of civilization, and at the other the Baltic world of the Maglemose culture and its descendents.

The next period in European prehistory, the Neolithic, or New Stone Age, brought in the essential elements of the revolutionary civilization that had meanwhile arisen in S. W. Asia, namely food-production by tillage and animal domestica-

tion, together with the invention of pottery, and improved stone and other tools implying various other vital inventions. The Neolithic was not first brought to Europe by either of the routes taken by the Tardenoisian Mesolithic. It entered between them, from Asia Minor to Crete, the Ægean Islands, Greece, and the Balkans, and so to the lower and lower middle Danube, which it had reached by about 3,000 B.C. Its bearers, like its originators in the Orient 2,000 years before, belonged to the Mediterranean race. The main highway of diffusion for their civilization further into Europe was up the Danube river-system, and the Neolithic culture thus established there is the Danubian. It was essentially agricultural, but had all the Neolithic arts already mentioned, and it ultimately reached the Rhine and the Meuse westward, and northward certain parts of the North German plain as far as the edge of the Baltic, having as it were by-passed the great Tardenoisian belt stretching this way from the Black Sea.

The skeletal remains of the Danubians show that their predominating strain was not merely Mediterranean, but of a reasonably stable and distinguishable type within the Mediterranean race. Some mixture with other types is indicated sometimes, and this agrees with the archæological evidence, which shows that the Danubian expansion was not just a gradual invasion by an exclusive Oriental folk, but a diffusion of agricultural civilization in which the incorporating of existing Mesolithic groups was as much a feature as the incoming of new Neolithic ones. Moreover, the Danubian civilization did not only spread the Neolithic arts by expanding itself, but also by diffusing them among further Mesolithic peoples outside its own limits. These neighbours included a fringe of the Eastern Tardenoisians, and also the descendents of the Maglemose folks round the W. Baltic, where a new Neolithic culture accordingly took root. This diffusion was going on in the centuries about and after 2,500 B.C.

Meanwhile, in the south-west and west, a diffusion of Neolithic civilization from the Orient was in these same centuries proceeding by way of N. Africa, by means principally of the immigration of peoples of the Mediterranean race in the strict sense of the term. Their most important entry was by the Iberian Peninsula, and from there and parts of southern France the immigrants carried Neolithic culture of a distinctive Western type, related ultimately to that of early Egypt, over widespread regions of Western Europe, including parts of the British Isles. This mainly overland diffusion was followed by the spread by sea of a distinct Mediterranean element of adventurers and traders, whose religious practice demanded the erection of great stone-built or megalithic tombs for the burial of the ruling class. The megalithic movement travelled right round the Atlantic coasts to arrive by about 2,300 B.C. in the Baltic North, where its bearers gave a strong fresh impulse to the Neolithic civilization we have already seen beginning, and also introduced some of their Mediterranean physical type.

Now at this point it might appear that the whole story of the implanting of civilization in Europe was a story of immigration and diffusion by groups of the Mediterranean race coming from the Orient—the exact opposite of the Nordic theory of Kossinna—and its demonstration simply a knock-out blow to the idea that Europe itself made any but a passive contribution to the making of European civilization. Europe might seem just a poor relation of the progressive Orient, the headquarters of the cultural leadership of the Mediterranean race. But prehistory is not so easy as that. This story of diffusion from the Orient is indeed the truth, but it is not the whole truth, any more than the theory of diffusion from the north. The whole truth will turn out to assign places to both these apparent opposites, and moreover to lead to a redefinition of the 'Nordic race,' and an explanation of the spread of the Aryan languages.

The Northern Neolithic, like its fellows elsewhere in Europe, presently gave place to a Bronze Age culture. Owing to the region's remoteness from the supplies of copper and tin required to make bronze, this began late, about 1,500 B.C., but it was not long in becoming strongly homogeneous, and in it the Germanic peoples who later spread out over so much of the continent were rooted, though they received some subsequent addition from the North European plain. But this Bronze Age culture did not arise solely from the Neolithic elements we have hitherto described, nor indeed did the majority of the other Bronze Age cultures of Europe. There was another and extremely potent contribution, and it came from the great belt of plain between the Black Sea and the Baltic, where we have

already seen the Eastern Tardenoisians and their Palæolithic forerunners. This region was not left to be a mere cultural backwater, for it was able to draw on Oriental civilization by means of a contact all its own, through the Armenian and Iranian highlands and the land-bridge of the Caucasus. This contact had already produced a Neolithic culture north of the Caucasus before 2,500 B.C., but one in which agriculture was subordinate: the people here were nomad hunters, and the increment of wealth and power brought them by the new culture must have been based largely on the flocks and herds of the nomad hunter turned pastoralist.

In the centuries onward from 2,500 B.C., the whole belt of plain, from the Caucasus and the Black Sea to the Baltic shores, saw the old Mesolithic culture transformed into Neolithic societies, with some agriculture and knowledge of copper, but a strong pastoral and hunting bent, utterly unlike the peasant communities of the Danubians to the west of them. The Oriental civilization, with which they had contact, was dominated by wealthy kings and princes, and in their evidently patriarchal society that dominance was echoed in the rise of warrior chieftains, whose round-barrow burials, the so-called *Kurgans*, reflect in their ritual ultimately the same Oriental idea as, for example, the Royal Tombs of Ur. Their typical weapon was the battle-axe, in Europe rendered usually in stone, which was buried in the right hand of the warrior, with other grave-goods, almost always including a pottery drinking-vessel or beaker, which came to be ornamented typically by patterns impressed round its neck with cords—the so-called 'Corded' Ware.'

Some of these Kurgan people were of a Mediterranean physical type quite similar to the Danubians, but as one goes north-west along their range of territory a distinctive type appears, still of the Mediterranean family but tall and long-headed with a very high cranial vault, and not wholly remote from the long-headed strain present in this eastern half of Europe in the Palæolithic and earlier Mesolithic. This distinctive type had probably its roots in the immigration of the Tardenoisian or later Mesolithic, for the folk who became the Corded-ware or Battleaxe people were certainly not entire newcomers now in the Neolithic when the Kurgan graves first reveal their presence.

It is at this point that we come up against the concept of the 'Nordic race.' Properly, this is a term relating to modern living man, and so connotes characters of the skin, hair, and eyes as well as of the skeleton. But skeletally, and especially craniologically speaking, a fairly stable type-range acceptable as 'Nordic' did come into being in the European Bronze Age, and it seems, on counts both of anthropology and archæology, that the Corded-ware people were one element in its direct ancestry. German scholars have extended the Nordic range to include the products of mixture with the broader-headed range of Palæolithic descent that we have noticed mainly in the west of Central and Northern Europe, as well as of the more easterly long-headed range to which we have seen it to be rather closer, while they have taken the Corded-ware skeletal type to be Nordic par excellence. In particular they assume this type to have been blond. Now here they are probably right. Blondness appears to have become a major racial character only among white groups that have lived at some time with sub-glacial conditions of light. Thus it may well have existed among Palæolithic Europeans, and its appearance among their immigrant successors should be expected from a racial past involving isolation in cold and depigmenting continental conditions north of the Eurasiatic mountain zone, that is, in just the quarter whence the Corded-ware people, or rather their Tardenoisian forefathers, appear to have come into Europe. Skeletally they are basically just a specialization of the Mediterranean strain. The same argument might apply, with less force perhaps, to the Danubians, or some of them, but not necessarily to any other Mediterranean group. The earliest archæological find of actual blond hair (in Early Bronze Age Denmark, on a girl's corpse preserved in a coffin), and the earliest portrayals in art and mentions in literature of blond hair, are all compatible with a major source for the character on the Eurasiatic steppes, and a diffusion effected by groups of the Mediterranean race located here; among whom, though some skeletally resemble the Danubians, the Corded-ware people are outstanding.

In prehistory, at any rate, the diffusion of these people is well recognized, and datable round about 2,100 B.C. Southward and south-eastward they penetrated into the Oriental cradle of civilization itself; south-westward, into Asia

Minor, to Troy and Macedonia and into Greece by the Balkans, westward into Rumania and Hungary and the middle Danube, and above all, from major secondary dispersal-centres in Saxony, Thüringia, and Poland, all over Central Europe, to the Alps and beyond on both sides of the Adriatic, to the Rhineland and later beyond also; and from there and the Netherlands, after crossing with other stocks, into the British Isles, where the *Kurgans* of the Russian steppe have become the familiar 'Round Barrows' of our downs and moors. Lastly, they thrust northwest and north into North Germany and Scandinavia. There it was that they entered into that fusion with the earlier inhabitants which produced the Germanic Bronze Age. Other groups went north to Finland, while yet others had reached Central Russia. Everywhere they crossed with the earlier inhabitants to some degree or other, and nowhere therefore does their physical type exist as a pure race to-day. The main approximations to the type properly called 'Nordic' to-day were reached by crossing with the Danubians, or others similar to them, and thus characterized Central Europe actually more than the North.

The mixture achieved in the North did indeed produce a comparable Nordic type as a component, though it came to include also the old broad-headed elements there, as well as the old long-heads, whom we have seen to be appreciably closer to the Corded-ware type. A common measure of blondness may have been a factor here. At all events, the mixture was a blend making for effective social solidarity, and the culture thereby achieved was very homogeneous. Thus group feeling in these Germanic peoples was probably always strong, and their great expansion over Europe in the later Iron Age has been of undeniable moment in subsequent history. But they have had no monopoly of this. Quite comparable solidarity, answering to the main formations of Nordic physical type that we have just mentioned, was achieved from the Corded-ware people's crossing with the Danubians and others in Central Europe. This produced the Illyrian group of peoples, and west of them, and with more other admixture, the original Celts, whose full composition, however, like that of the Italians and the Greeks, is complicated by later movements. Much might be said of the social character of these great European groupings in relation to the class structure, but that lies outside the scope of this paper. In material culture the invaders certainly made a contribution everywhere, but since they were not the originators of civilization, they naturally received more than they were able to give. Their potency showed itself far more effective in the sphere of language. For it is their expansion which appears to explain the diffusion of the Aryan languages, Greek, Illyric, Italic, Celtic, Germanic—if not also Slavic, which presents problems of its own. And so here, in the true, linguistic sense of the name, the Aryans may be allowed to come at last into their own.

Thus we reach the conclusion that the pattern of social and material culture, of language, and of physical type in Europe all have explanations in prehistory, continued by history proper, and they are all to some extent connected, but very variously. Outstanding events like the Danubian diffusion and the more warlike expansion of the Aryan-speakers, no less than the achievements of Greeks and Romans, Illyrians and Celts, or Germans and Slavs, have in their time done something to pull the patterns together, but in the long run the vitality of Europe is what it is, precisely because its history is so mixed and moving, and of this vitality no one race has ever had a monopoly. And so, it is only by a falsified account of the past that the concept of race can be used to-day for the inflaming of nationalism. The group-feeling which, as we saw at the start, must be recognized as natural to the units of human society based on kinship, should on the contrary be modified by progressive re-education along other lines. Prehistory can help here by promoting a truer valuation of European culture, emphasizing that its progress has come not through racial exclusiveness, but through the continual mingling and interaction of its diversity of component groups and peoples.

NOTE.—The nature of this paper precludes any detailed documentation, but reference to a certain number of relevant books may be found useful. An easy starting-point may be taken in *We Europeans: A Survey of 'Racial' Problems*, by Julian Huxley and A. C. Haddon (London, Cape, 1935), which, however, proceeds to a rather less positive conception of race in Europe, and is now no longer up to date in its prehistory. This may be remedied in the first place by consulting *The Dawn of European Civilization*, by V. Gordon Childe, 2nd (re-written) edition (London, Kegan Paul, 1939), the chapters of which deal successively with the prehistory of each of the main regions of Europe from the Mesolithic to the Middle Bronze Age. There are now two books complementary to Professor Childe's basic

presentation. The first is *The Races of Europe*, by Carleton S. Coon (New York, Macmillan, 1939), which is the most ambitious—and by far the most successful—modern essay in the synthesis of prehistory, philology, physical geography and physical anthropology for early Europe. The correlation of physical anthropology with the archaeological and other evidence, as put forward by Professor Coon, has here been taken as a major achievement in the progress of the subject, which all future work must treat as fundamental. At the same time, what I believe to be certain advances on a primarily archaeological basis will be found in *The Prehistoric Foundations of Europe*, by C. F. C. Hawkes (London, Methuen, 1940), in the finishing of which I had the advantage of Childe's re-written *Dawn* before me, and enough additional material to make my presentation different in some (usually minor) respects from his, and also from Coon's, which, however, was not available to me in time for use. The substantial agreement between these three works, originating quite independently of each other, and in Coon's case written by a physical anthropologist, in Childe's and my own by archaeologists, is extremely striking, far outweighing their differences of treatment. Indeed, I think one can really claim that European prehistory as a document for the study of race has now at last begun to present the outline of an agreed and consistent picture. The result should hereafter benefit the anthropology not only of race, but also of social institutions in their historical aspect. In this last connexion, Marxists and some others will detect in my fourth paragraph above a certain echo from Friedrich Engels, *The Origin of the Family* (now available, authoritatively translated, in the Marxist-Leninist Library. London, Lawrence & Wishart, 1942). If the reverberations of this echo are in the present paper not very protracted, that is because the matter has not yet been carried further by specifically Marxist writers available to me in present circumstances. When it is, the situation may become more and more interesting. At any rate, with the German racial theories exploited by the Nazis put definitely out of the way, the whole subject appears fully ready for further development on rational lines.

C. F. C. H., May 1942.

PREHISTORY IN THE U.S.S.R. II. THE COPPER AGE IN SOUTH RUSSIA. *By Professor V. Gordon Childe, F.S.A., The University of Edinburgh.*

74 In South Russia, dune sites on which microliths are associated with pottery (*TSA.*, iv, 130, Lower Volga; *K.S.* iv, 30, Lower Dneipr) carry on the archaeological record from mesolithic times into the Early Copper Age. But, as in the British Isles, the record from graves is much fuller till the Late Copper Age. The *relative chronology* is given by the sequence of interments under barrows covering successive burials. A typology based upon metal forms is of little help since unalloyed copper seems to have been used right down to the Iron Age, and seriously cramped the smith's style. The well-known sequence of burials in *yamy* (shafts), in *catacombs* (pit-caves), in *srubi* (coffins of mortised planks) and 'in the mound and on the horizon,' established by Gorodtsov for the Donetz, and proved valid for the Manych by Artamonov (*S.A.*, iv (1937), 93–131) needs modification as follows: (a) a new Period I must be created to accommodate the collective burials at Mariupol and Nalchik that seem older than any individual *yamno* burials (like some long barrows in Britain). (b) In the north Caucasus Schmidt's Early Kuban group is best assigned to a sub-period IB, since hammer pins appropriate to his Middle Kuban group occur in *yamno* graves of Period II (unless with Degen-Kovalevskii, *K.S.*, ii, 14–17, we transfer the group bodily to Period IV!). (c) Since even on the Donetz *yamy* were admittedly still dug in catacomb times and on the Lower Volga, the Kuban-Terek and the Dneipr catacombs and *srubi* are excessively rare, Period II is best defined by pottery and ornaments. Such indeed are so rare, especially on the Volga, that some primary *yamno* graves, plainly older than secondaries of Period III—Poltavka phase under the same barrow, might still be anterior to Period II as thus defined. Still round-bottomed ovoid vases, plain or decorated with cord, maggot or comb impressions, are distinctive of true *yamno* burials on the Volga, the Manych and the Dneipr as well as on the Donetz. Hammer pins of bone are associated with such on the Lower Volga (*E.S.A.*, iv, 42–9, rejecting Rau's interpretation of the relation between graves 8 and 9) and between Don and Dneipr (*E.S.A.*, viii, p. 138, fig. 141, and ii, 52 (Serogozy)) or occur in admittedly early *yamno* graves (*IGAIMK.*, 100, 209), but only one out of nineteen is said to have come from a catacomb (*E.S.A.*, ii, 47). Period II will accordingly comprise most of Schmidt's Middle Kuban graves in north Caucasia to which hammer pins are proper—one was in fact found in the barrow above a primary Early Kuban burial at Psebaikaya (*Otchet*, 895, 79) while at Konstantinovka an ovoid *yamno* vase was associated with a Pyatigorsk battle-axe, assigned by Äyräpää to the Middle Kuban phase (*E.S.A.*, viii, 129).

(d) Period III can then be defined by cross-

footed 'incense-burners' (as from the Manych catacombs) and flat bottomed bulging vases richly ornamented with whipped or braided cord or comb impressions. In the Poltavka phase on the Lower Volga such occupy a position typologically intermediate between the round bottomed *yamno* and the keeled Srubno-Khvalynsk forms (*Soobshcheniya GAIMK*, 1931, 8, p. 33; Rau, *Hockergräber*, 18) and stratigraphically accompany eccentric burials, secondary to early *yamno* graves without furniture (Rau, *l.c.*, 42–8). The contemporary daggers have flat tangs expanding to the pommel on the Lower Volga (Rau, *l.c.*, Pl. III, 3) as in the Donetz catacombs (figs. 2 & 4). (e) Keeled vases ornamented with zig-zags, rhombs or maeandroid patterns comb-stamped or incised and midrib daggers with profiled blades and tangs (figs. 3 and 5) characterize Period IV on the Lower Volga (*E.S.A.*, i, pp. 75 and 80) as well as on the Donetz (*E.S.A.*, ii, 123 and 71). (f) A final phase of the Late Copper Age (Period V) could then be defined by the 'box-shaped' vases, generally plain but rather like British 'Pygmy Vessels,' that occur with secondaries in the barrows of the Donetz and Manych, but sometimes in independent barrows in the later Khvalynsk culture of the Lower Volga. They may be contemporary with the archaic Scythian burials on the Kuban while Rykov insists that such Khvalynsk burials 'pass over into the so-called "Scythian" on the steppe, and into the *gorodishche* culture with pseudo-mat pottery in forest zone' (*TSA.*, iv, 32). Gorodtsov reports the discovery of iron in 'a *srubno* burial, Samara type' near Kuby shev (*TSA.*, iii, 50). (g) The foregoing scheme is scarcely applicable west of the Dniepr. A possible way of extending it is suggested by Gorodtsov's interpretation of the sequence of interments in the composite 'Odessa Kurgan' (*Otchet Imp. Ross. Istor. Muzea v Moskve za* 1915 *g.*, 117–137) namely (i) Original kurgan heaped over a primary *yamno* grave; (ii) three catacombs and three 'shaft graves of catacomb age' dug into the mound; (iii) erection of cist graves connected with a double stone ring ('cromlech') and addition of a mantling barrow; (iv) insertion of secondaries into the enlarged mound. As (i) and (ii) represent our Periods II and III the stone cists and megaliths belong to IV. If this conclusion be accepted and generalized, it would follow that the Usatova barrows, that structurally resemble complex (iii), and therefore also the latest, stage C Tripolye pottery (Passek, *La Céramique tripolienne*, *IGAIMK*, 122 (1935), p. 122) and the Ukrainian corded ware that looks as if it were derived from the Saxo-Thuringian, belong to Period IV of the steppe sequence. This conclusion is not intrinsically improbable. For on the one hand the kurgan that had disturbed a late Tripolye house at Khalepye 'covered a wooden burial chamber at ground level' (*Trudy* XI, 776) and so presumably belonged to Period IV; on the other Nestor (*BRGK* 22, p. 51, n. 80) reports *grey Minyan ware* associated with painted pottery of style A. But the association of a battle axe of catacomb type with Early Macedonian pottery at Hagios Mamos should mean that Period III began before the Minyan phase in Macedonia and therefore not later than style A of the Dnestrian painted ware.

Again in the Yatskovitsa cemetery west of the Middle Dnepr Sulimirski (*Die schnurkeramischen Kulturen und das indoeuropäische Problem*, Warsaw, 1933, 5–6) can distinguish—typologically—three stages later than the shaft graves with ovoid vases and claims a similar sequence in East Galicia. Here again corded ware of a 'Saxo-Thuringian' aspect with amphorae and flat-bottomed beakers is confined to the later stages and certainly not anterior to Period III.

The foregoing chronological scheme is of course provisional and a considerable overlapping between the several periods must be admitted. It may none the less provide a convenient framework for a summary of recent additions to knowledge of the Pontic cultures such as are not easily accessible in Tallgren's accounts in *E.S.A.* or my own in *Dawn of European Civilization* (1939).

PERIOD I. At Mariupol (Makarenko *Mariupolskii Mogilnik* (Ukrainian with English resumé) Vse-ukrainska Akademiya Nauk, Kiev, 1933) 126 skeletons, mostly of adults, lay extended in groups of from three to twenty across a trench filled with red earth, 28 m. long by 2 m. wide. At Nalchik (Hančar, *Kaukasiens*, 222 ff.; full Russian report announced for 1941) a low mound 30 m. in diameter, covered 130 contracted skeletons, again in groups and sprinkled with red pigment. In neither case was any direct evidence for agriculture or stockbreeding observed nor yet fishing tackle nor hunting gear. Pottery is reported only from Nalchik; two flint axes with

polished edges and (not certainly associated with a burial) microliths—trapezes—were found at Mariupol. Ornaments included a pendant of porphyry (from the Urals or the Caucasus) and hemispherical shell beads, like some from Anau I, from Mariupol, beads of carnelian, 'paste' and copper from Nalchik already indicate 'trade.' Knobbed maces heads with two skeletons at Mariupol must be badges of chieftainship, personal rather than hereditary. This type of mace was notoriously popular in Mesopotamia, the earliest dated examples, from Tel Aghrab, belonging to Early Dynastic III, but it recurs later in South Russia (at Yeremye, Tripolye phase B [*Trudy* XI, 778] in the Borodino hoard and later still). Makarenko suggests a derivation from the rhomboid club-heads of the Northern Forest culture; one such has in fact been found on the steppes with a single coloured and contracted skeleton buried without a barrow at Krivoluchie on the Lower Volga (*Soobshcheniya GAIMK*., 1931, 7–8) accompanied by flint-arrow-heads, stone bracelets and beads of shell and deers' teeth. A stone figurine from Nalchik is hailed as evidence for matriarchy. The negative evidence does not prove that the communities buried at Mariupol and Nalchik remained food-gatherers. The burials are five times as numerous as in the mesolithic cemeteries of Tevice and Offnet, but are comparable in numbers and also in points of ritual with the Natufian burials of Mt. Carmel. But the Natufians seem to have been cultivators.

The impact of Mesopotamian civilization on clans living near Caucasian ores must account for the emergence of the chiefs—again not necessarily hereditary—buried in the famous Early Kuban barrows of Maikop, Novosvodobnaya, etc., as well as for their Oriental wealth. But, primarily, 'preserve the uniformity of the historical process,' Degen-Kovalevskii has argued that these rich barrows should immediately precede the 'Scythian stage.' For that there is also objective evidence. Some do form part of archaic Scythian cemeteries (*e.g.* Kostromskaya); the socketed flesh-hooks from Novosvodobnaya find their best parallels in the IInd millennium in Transcaucasia; the human figures in the Kazbek treasure (*E.S.A.*, v, 123, 160); the Maikop canopy in post-Hittite Assyria; the Maikop transverse axe might be the immediate precursor of the shaft-hole hoes of the Kuban period (*IGAIMK*., 129, fig. 17, 5). Nevertheless, if these rich tombs were to be dated round about 1,000 B.C., the complete absence from them of distinctive Kuban types and even of objects decorated in the Middle Kuban style would be inexplicable. And the lunates in mesolithic tradition from Maikop would be more 'irregular' than the rise of nine isolated leaders to precocious power and wealth.

PERIOD II then witnesses the foundation of a local school of metallurgy in North Caucasia, using presumably local copper but no alloys (analyses in *IGAIMK*., 119, 2, 242–4) and producing hammer-pins and other ornaments decorated *cire perdue* in imitation of filigree work, narrow flat celts, flat rivetless tanged daggers (fig. 1) (but exceptionally also round-heeled riveted daggers with Central European analogies noted by Tallgren, *E.S.A.*, iv, 35) and a shaft-hole axe with four ridges on the butt very like one dated about 1,500 B.C. from Tepe Gitan (Contenau and Ghirshman, Pl. 22, T. 70). The female figurines from Ulski might mean a persistence of 'matriarchy.' But the metal weapons and stone battle-axes of Pyatigorsk type give the tombs a martial aspect that does not seem irregular if it be admitted that for historico-geographical reasons society evolved faster on the Kuban-Terek than on the North Pontic steppe.

There explicit weapons of war are missing from the *yamno* graves though arrow heads occur as well as harpoons and composite fish-hooks of bone. Metal is represented only by a few quadrangular awls, a couple of flat tanged knife-daggers from the lower Dniepr, and perhaps broad thin flat celts from the Lower Volga (*E.S.A.*, iv, 49 with hammer pin and ovoid vase, but others with flat-bottomed Poltavka vases, Rau, *Hocker gräber*, Pl. 1, 3–5, or with a shaft-hole axe, *TSA.*, iv, 131) and lockrings on the Volga. The hammer pins are all of bone. Their distribution along the Volga and the Dniepr but not the Don might be held to favour an Anatolian centre of dispersion. As mother and child were sometimes buried together, but never man and wife, Krugłov and Podgayetskii infer that steppe society was still organized in matriarchal clans (*IGAIMK*., 119, 141–5).

The graves, especially on the eastern steppes, are often large, say 2 m. long by 1·5 m. wide and 1·3 or even 2·3 m. deep. They are normally roofed with logs or planks roughly shaped with stone tools that in deeper graves may rest on a

ledge in the shaft walls. The corpse, generally contracted on the side or the back, but exceptionally extended (on the Donetz), is thickly sprinkled with ochre and may rest on a bier or bed of rushes. Round the floor of two graves under kurgan 7 near Elista (Kalmuk territory) Rykov (*IGAIMK.*,100, 203–8) found the holes for 22 poles which, converging inwards at an angle of 70 degrees, must have formed a tent-like mortuary house over the corpse. A similar construction was recorded without being understood in two *yamno* graves at Byelozerka on the Lower Dnieper in 1897 (*Trudy* VIII, Vol. 3, 89). The idea of the mortuary house is of course embodied in the Maikop burial chamber and in the 'dolmens' at Novosvodobnaya—especially in No. I with its gabled roof—and survived on the steppes till Scythian times.

PERIOD III on the north Pontic steppes is treated by Kruglov and Podgayetskii (*IGAIMK.*, 119, 161–4) as the era of transition from 'matriarchy' to 'patriarchy' attested on the Donetz (i) by burials of man and wife together, and (ii) by the sacrifice of cattle at adult males' funerals only, while women and children had to be content with sheep. The primary cause of the change would be the increased importance of stock-breeding, a male occupation, in the tribal economy; while the only cereal found in catacombs is millet, bones of cattle and sheep are common; those of horses also occur. Their deposition in the tomb would also indicate the passage of society's capital into private ownership. Cattle reeving provides now an economic motive for war; hence we find stone battle-axes—of the heeled type in the Donetz catacombs, a knobbed form perhaps in the Poltavka graves of the Volga (*E.S.A.*, i, 78 with narrow copper flat celt in a grave secondary to a central *yamno* interment).

Warfare has intensified the demand for metal while stock-breeding and agriculture can now produce a surplus to support at least itinerant smiths; perhaps the copper lodes near Bakhmut were now worked, prehistoric exploitation being in any case certain. It was common enough for narrow copper chisels to be used in digging catacombs. Beads of 'paste,' glass and chalcedony were also imported. Cases of cranial deformation and of trepanation (not quite certain) and one instance of cremation have been reported from catacombs. Red colour was less intensively and systematically used and was sometimes replaced by white chalk.

In North Caucasia the transition just mentioned must have taken place in Period II. The Middle Kuban graves must be sustadial with the catacombs; some may be actually contemporary (the simpler Pyatigorsk axes, for instance, are closely allied to the catacomb heeled type, and Middle Kuban daggers occur in catacombs exceptionally—*E.S.A.*, ii, p. 67). But on the Kuban-Terek, apart from actual catacombs near Armavir and Urupskaya, Period III is represented explicitly only by ten graves with cross-footed vases (listed by Hančar, pp. 277–280) and a secondary grave at Ulski that contained arrow-shaft straighteners and the well known model hut or wagon. Most tombs, being sustadial with the *srubno* graves of the steppes, will, like the latter, have been poorly furnished save for pottery that the earlier excavators generally neglected. But the hoard from Privolnoe containing two typical 'catacomb daggers,' a flat celt, a chisel with folded flanges and an axe with drooping shaft-hole must belong here. So may the Kostromskaya hoard comprising similar chisels and axes and a number of tanged sickles.

PERIOD IV. The Late Copper Age of South Russia exhibits many traits common to the Late Bronze Age of the rest of Europe, but with significant divergences. (a) As in the British Isles and elsewhere grave furniture, apart from vases, is relatively poorer than in the previous periods; round Izyum twenty-two graves out of thirty-seven in Period IV lacked furniture as against only one in III. Kruglov and Podgayetskii ingeniously explain this phenomenon as a symbol and consequence of a new conception of property as wealth: to accumulate wealth within the family the greed of the heirs robs the deceased of his personal possessions (*IGAIMK.*, 119, 171). In any case it makes the subdivision of the age and the distinction between IV and V difficult.

(b) Mixed farming seems to have become more intensive and productive just as in southern England and other parts of western Europe. Convincing proof of this is furnished first by the numbers of metal sickles found stray, in hoards and even in graves (*IGAIMK.*, 119, 80—Donetz), flint sickle teeth (*e.g. E.S.A.*, v, 24) and animals' jaw-bones used as the handles for such (*TSA.*, iv, 132). Then the nomad's tent of *yamno* times was replaced by gabled rectangular mortuary houses

supported by stout posts that were built over *srubi* on the Donetz (*Trudy*, xiii, 234–5) or shaft-graves on the Lower Volga and the Dniepr. They reproduce dwellings such as have been found in numerous settlements of Period IV–V near Pokrovsk on the Lower Volga (*TSA.*, iv, 132), at Lyapichev near the junction of Don and Tsaritsa (*IGAIMK.*, 119, 120–4) Kostienki on the Don and near Voronezh (*E.S.*, ii, 17). In all these settlements the bones of game animals form a negligible proportion; cattle predominate, then sheep and goats, finally horses and pigs—an assemblage indicative of sedentary farming. But camel bones have been reported from Voronezh as from the earlier Tripolye site of Verenye. Perforated vases from the settlements are supposed, as in Central Europe, to have served for cheese-making.

(c) As everywhere else in Europe metal was much more abundant and cheaper than heretofore. It was used for everyday tools like knives, sickles, and gouges as well as for arms and ornaments. Slag, crucibles and moulds of clay or stone from the settlements (Kostienki, Voronezh; the moulds from dune-sites on the Middle and Lower Dniepr, described as *fonderies* by Tallgren, *E.S.A.*, ii, 146, must be derived from similar settlements) suggest resident professional smiths. Such were accorded burial under kurgans with their equipment (mould for a shaft-hole axe with a Khvalynsk vase from barrow near Kievka, Voronezh, *E.S.A.*, ii, 73). South Russia benefited from the industrial revolution that transformed the metallurgical industry throughout Europe. But it did not thereby secure tin; the analysed objects of the period are still of unalloyed copper (*IGAIMK.*, 110, ii, 242—socketed celt!). Of course in Ossetia the brilliant Koban culture used tin bronze, but it had little effect on the steppe cultures; while a few Koban types reached the Kuban and even Dniepr (see map *IGAIMK.*, 120, 152) they are hardly ever found in steppe graves. On the contrary, even on the Kuban such may contain two-eared socketed celts and *srubno* daggers proper to the northern steppes (*IGAIMK.*, 120, 136). Again most of the new types are Oriental or frankly Pontic-axes with drooping shaft-hole, chisels with folded sockets, tanged spear-heads, hooked sickles; the Khvalynsk spear-heads with folded and pegged or cast and looped sockets (*E.S.A.*, i, 57) might be southern (Mycenaean). Only the socketed celts look definitely Western—*i.e.* Central European, and even these soon assumed a Pontic form—the two-eared celt (*TSA.*, ii, 56). Western forms that affected methods of fighting or costume never caught on; of the types so characteristic in the Late Bronze Age in Central Europe I know only two or three stray swords all from West of the Dniepr (*E.S.A.*, ii, 202–3; *Swiatowit*, xv, 118), one razor and that Cypriote or Sicilian (*E.S.A.*, iv, 131—Tsareva Mohila near Krivoi Rog) and two fibulae, double-looped, of Illyrian-Hallstatt type (*E.S.A.*, vi, 175–7), the other an early lock brooch (*W.A.*, xiv, 1936, Pl. XII, 2). One factor in augmenting the supply of copper must have been the opening up of Ural lodes. It explains the relative wealth of the Khvalynsk tombs and others farther east.

(d) Cremation, the normal burial rite in Late Bronze Age Europe, was practised sporadically in South Russia west of the Don, but never altogether replaced inhumation. On the Volga fires were kindled on the edge of the Khvalynsk grave shafts (*E.S.A.*, i, 53) but for funerary feasts rather than to consume the corpse, which is always unburnt. On the Donetz Gorodtsov reports three cremations from *srubno* graves (*E.S.A.*, ii, 39) west of the Dniepr some barrows covered exclusively cremated remains, others cremations and inhumations, others again still only red skeletons (*cf.*, *e.g. E.S.A.*, v, 24 ff.). The ashes were sometimes inurned, but the urns might be deposited in quite large mortuary houses. The statement that here and elsewhere such houses were burned, repeated from earlier excavators by Rostovtseff and Tallgren, seems to me suspect; the condition of the timbers might be due to natural carbonization. Even in Podolia cremation was abnormal; in the Wysocko cemetery of flat graves 93 per cent. contained extended skeletons (Sulimirski, *Kultura, Wysocko*, Poznan, 1931). The precise distribution of these rites in the Ukraine is still in need of detailed plotting. Sulimirski has made a beginning in *W.A.*, xiv (1936), 49–52. He has also published there a few ornaments (spiral-headed pins and spectacle (spirals) of Lausitz type from the Middle Dniepr and emphasized the 'Lausitz' affinities of one group of socketed celts. Still a general 'urnfield' 'invasion' is by no means a necessary deduction. Cremation might be derived from the Tripolye culture—Seerbakivskyj (*Inst. Inter. d-Anthr.*, C.R., Paris, 1931, 473) cites possible evidence

from Kolodistoe, Kiev—and is in any case attested in stone cists with Globular Amphorae. New ceramic types certainly appear in the Ukraine during Period V—polished and incised cups and jugs with thumb-grip handles (*E.S.A.*, iv, 165; v, 30), but their affinities lie in Thrace and Illyria, not Lausitz.

(e) Both the armoury of efficient weapons from graves and hoards and the fortifications of some settlements (*IGAIMK.*, 119, 173–4) give Period IV a still more martial aspect than III. In addition to cattle Kruglov and Podgayetskii suggest that slaves would now be welcome prizes since thanks to improved tools and weapons a man could now produce more than his keep. They admit too 'congestion on the land coupled with the existence of nomadism.' War might give fresh opportunities for the rise of chieftains. The best evidence for Period IV is the famous hoard of Borodino in Bessarabia, consisting of ceremonial weapons of stone and bronze (copper?). Its relative age is given by the looped spear-head of Khvalynsk type, while the fantastic stone battle-axes should, I suspect, be connected with the bronze axes of Faskau; (for the pin see Nestor, *Dacia*, v–vi, 175–187).

By Period V at least iron was everywhere competing with bronze. Makarenko calls the pre-Scythian Iron Age of the Ukraine, Hallstattian, but sites no genuine Hallstatt types. On the Don iron as well as copper was worked at Kostianki and Voronezh (*K.S.*, ii, 18) while on the Volga Gorodtsov reports iron from one *srubno* grave (*TSA.*, iii, 50). Period V can be properly defined only when the domestic pottery has been published. In North Caucasia even Period IV is represented only by a few graves, mostly secondaries, containing two-eared celts, or *srubno* daggers, Koban pins (*E.S.A.*, vi, 130) or keeled vases of *srubno* form (*ibid.* fig. 11). This apparent paucity of material strengthens the case for transferring the Early Kuban group to this Period, but may be due simply to the neglect of early excavators. Domestic sites have now been examined and the publication of the results should materially clarify the position.

ORIGINS. Soviet prehistorians have treated the Steppe societies as autochthonous, i.e. as descended from local palaeolithic and mesolithic stocks. By this very fact they would be related to the principal adjacent groups—the hunter-fishers of the Forest zone to the north (who came to make pit-comb and Peterborough wares) and the cultivators of the Dniestro-Danubian löss lands. In each province the internal economic and social development followed the same general lines from a matriarchal organization (based on sedentary hunting and fishing in the northern forests, on plot-cultivation in the western parklands) to a patriarchal one based on pastoralism (*e.g.* Krichevskii, 'Mezolit i neolit Evropi,' *K.S.*, iv, 7–12). Differences in the form and tempo of the process, due to environmental and historical causes (diffusion) are of course admitted and indeed given greater prominence to-day than six years ago (compare Krichevskii's articles in *IGAIMK.*, 100, 1933, 158–203 and in *K.S.*, viii, 1940, 49–62 [1]). Still, in view of the common background from which they spring, the pastoral cultures that eventually emerge—Catacomb-Poltavka on the Steppes, Fatyanovo in Central Russia, the 'Nordic' cultures of Danubian III—'naturally' exhibit similarities even in equipment (and perhaps in language too). To 'explain' these there is no need to invoke migrations. Only of Corded ware (including the Ukrainian) Krichevskii writes (*K.S.*, iv, 11): 'Various tribes—late Tripolye, late Lengyel, Walternienburg, Globular Amphora, Megalithic, etc.—amalgamated in a new cultural unit.' The origin of the plants and animals cultivated and bred on the Dniestro-Danubian parklands and the Pontic steppes has been deliberately avoided in these discussions (in Central Russia it is frankly admitted that sheep and horses were introduced as domestic animals—Tretiakov, *IGAIMK.*, 106, 164; Zbruyev, *S.A.*, iii, 38). Neither area falls within any of the 'primary foci of domestication,' admitted by Bogayevskii, *Istoriya Tekhniki*, I, 1, 1936, 606–9, Tab. IX–X). But Gromova's identification of wild sheep in the Crimea from pleistocene times opens up the possibility of a Pontic cradle of stock-breeding.

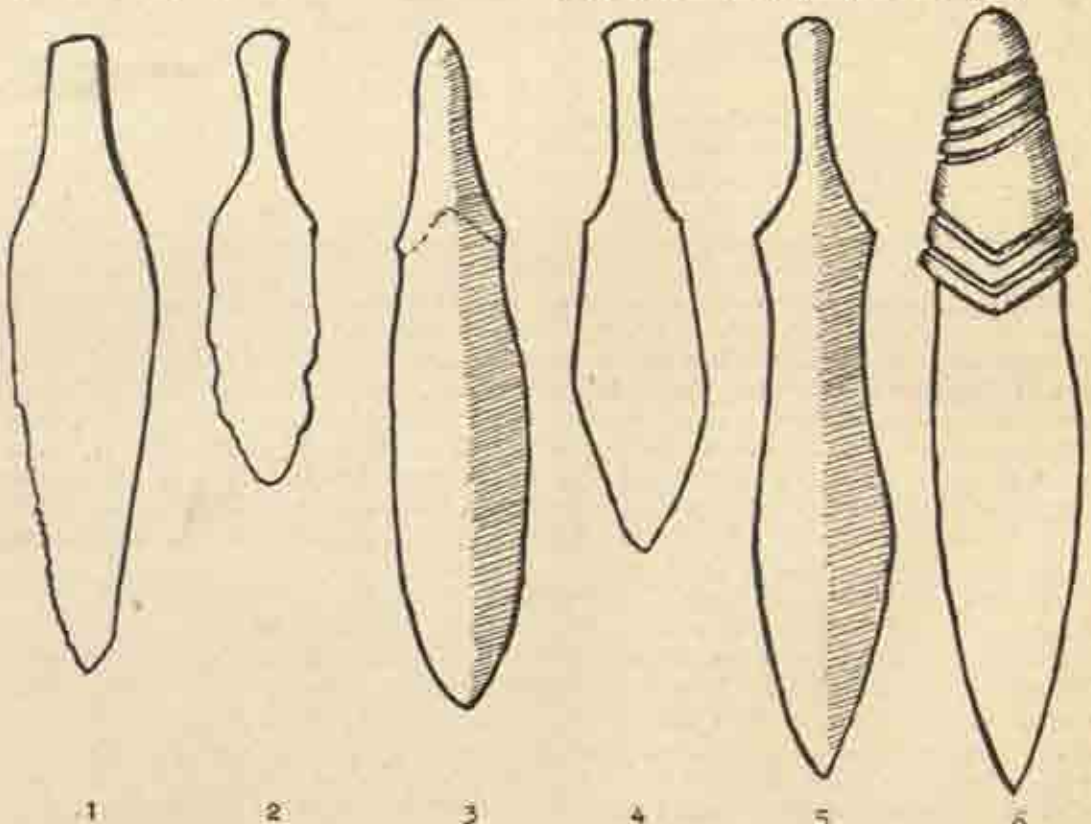
In the sequel Scythian civilization will probably be presented as just a further stage in the autochthonous development of steppe society though its rise lies outside the scope of Kruglov and Podgayetskii's review. Copper Age survivals are in fact now very conspicuous in Scythian civilization: the idea of the mortuary house has been traced back to *yamno* times. For the eastern steppes and Podolia Grakova (*E.S.A.*, iii, 54–5) and Sulimirski (*Skytowie na zachodniem Podolu*,

Lwów, 1936, 103-5) respectively have shown, what was already notorious for the Middle and Lower Dniepr and the Crimea, that in each region Scythian tombs conform to the type previously current in the locality. Beyond the Volga, as on the Dniepr, ochre strewing is still encountered, albeit in a sporadic and attenuated form. Bone arrow-heads with a triangular cross-section have been found in Khvalynsk graves (*E.S.A.*, i, 61) and could form the prototypes of the Scythian form. In fact the differentiae of Scythian civilization are of the same order as those distinguishing La Tène from Hallstatt in south-western Germany and north-eastern France. No one would now explain the latter by a migration from some *terra incognita*.

At the same time on the Siberian steppes the oldest Copper Age culture, that of Afanasievo (*Mat. po Yetnografiya*, iv (1929), 53 ff), appears as intrusively western round Minusinsk (*K.S.*, ix, 13) its authors Europeoid in contrast to the forest Mongoloids (*K.S.*, ix, 15). Its characteristic ovoid pots are obviously allied to *yamno* types, but a minority of flat-bottomed vases and other traits referable to the European catacomb culture (*S.A.*, ii, 74 ff.) imply that it belongs in time to our Period III. Its successor, the Andronovo culture is no less clearly a Siberian counterpart of the Khvalynsk culture of Period IV with which it shares ceramic motives and forms and metal types.

ABBREVIATIONS

E.S.A. = *Eurasia Septentrionalis Antiqua*, Helsinki.
GAIMK = *Gosudarstvennaya Akademiya Istorii Materialnoi Kultury*.
IGAIMK = *Izvestiya* GAIMK.
K.S. = *Kratkie Soobsheheniya o Dokladakh i polevykh Issledovaniyakh Instituta Istorii Materialnoi Kultury*, Akademiya Nauk SSSR.
S.A. = *Sovietskaya Arkheologiya*.
TSA = *Trudy Sektsii Arkheologii Rossiiskaya Assotsiatsiya nauchno-issledovatelskikh Institutov obshchestvennikh Nauk*, Moskva.
Trudy = *Trudy . . . arch. Sizda*.
W.A. = *Wiadomości Archeologiczne*, Warszawa.



1 2 3 4 5 6

FIG. 1.—MIDDLE KUBAN DAGGER, KONSTANTINOVKA.
„ 2.—CATACOMB DAGGER, PORBOYSKOE, DONETZ.
„ 3.—SRUBNO DAGGER, SKORNIAKOVO.
FIG. 4.—POLTAVKA DAGGER, GÖBEL, E10.
„ 5.—KHVALYNSK DAGGER, R. KHOPRY.
„ 6.—KHVALYNSK DAGGER WITH HILT, R. KHOPRY.

ROYAL ANTHROPOLOGICAL INSTITUTE: PROCEEDINGS

75 The Social Origin of Linguistic Categories.

Summary of a Communication by Dr. Alf Sommerfelt: 16 June, 1942.

The social character of language is now generally recognized both by linguists and by anthropologists. Linguistic change has been explained through the action of social causes. But the fundamental question of the origin of linguistic categories has not received much attention. Are the linguistic categories, found in the Indo-European languages, universal? If not, can the absence or the presence of such categories be explained by the character of the society which uses the language in question?

To get a starting point of the study of this problem it is necessary to investigate the characters of a language which is spoken by a people on the lowest stage of civilization. To determine these characters, elaborate texts are required, texts taken down in such a way that it is possible to establish the phonological system of the language. Very few languages of simpler peoples have been described in a way that meets these requirements. Going through the available material, I found that the language of the Aruntа in Central Australia could be used as a starting point. The civilization of this people is known through Spencer and Gillen's works, now classic, and through the elaborate texts published by the German missionary Strehlow.

I have published the first results of my comparative study of the Aruntа language and civilization in my book *La Langue et la Société* (Institute for Comparative Research in Human Culture), Oslo, 1938.

Starting from the principle that it is not permitted to reckon with other categories than those which have their formal expression in the language, I found that the fundamental unit in Aruntа is a syllable consisting of one of the three vowels *a*, *i*, or *u*, preceded by a consonant or a simple group of consonants which may have before it an indefinite vowel of no phonological importance. This unit may correspond to the different categories of our languages, *e.g.* *no* 'to sit' and 'that which is sitting' (*e.g.* the grass), *ku* 'to eat' and 'that which is eat, point,' *la* 'to go' and 'leg.' More complete notions are rendered by composition of the fundamental units, *e.g.* *lu-ka* 'beat, killed' (from *lu* 'beat, kill' and *ka*), *ɾpa-nka* 'fish' (from *ɾpa* 'to plunge' and *nka* 'to carry or to be carried afar'). There are no distinctions of quantity, stress, or tones, of a phonological character.

This system differs very much from the description given by European missionaries who, however, have only sought to determine how Latin categories are expressed in Aruntа. I was forced to draw my conclusions from a study of the facts, conclusions which surprised me very much, as I had thought, with Meillet, that at least the difference between the verb and the noun was a fundamental one in human language. A comparison with Aruntа civilization shows, however, how this language was perfectly sufficient for the needs of the Aruntа people. It is therefore possible to conclude that the linguistic categories must have developed out from definite social needs. It is also possible to draw the conclusion that Lévy-Bruhl's famous *loi de participation* is not prelogic or alogic. Lévy-Bruhl's law is contrary to our logic, which is founded on our linguistic categories. But it is obvious that a so-to-speak one-dimensional classification entails identifications quite different from the multi-dimensional classifications used by us.

OBITUARY

George Andrew Reisner. d. 6 June, 1942.

76 Scientific excavation owes most of its stratigraphical technique to two men—Sir William Flinders Petrie and George Andrew Reisner. Petrie, with about fifteen years start, but always hampered by limited resources, introduced systematic record of sites and finds, and combined typological with stratigraphical criteria in a method of 'sequence dating' which utilized independent classes of objects to confirm indications derived from each. Reisner, who had started as a cuneiform scholar, began work in Egypt in 1899, at Naga-ed-Dêr where his early cemeteries supplemented those explored by Petrie in the same district. His more minute records, and especially the lavish use of photography, made his reputation at once, and in 1905 he was given the direction of the field work of Harvard University, which he retained with only three years interval, 1907–9, when he was in charge of the Survey of Nubia for the Government of Egypt. His enterprises covered many sites and periods from Gizeh to Nubia, and he was a pioneer in Ethiopian archaeology at Kerma. Outside Egypt he spent two seasons (1909–10), at Samaria, where he identified the buildings of Omri and Ahab, but did not attempt a complete examination of the site, nor had he the good luck of subsequent excavators, in the 'ivory house' itself. Best known is his long-continued work on the Great and the Third Pyramid and the contemporary cemetery of Old Kingdom dignitaries, including the rich tomb of Queen Hetepheres, the mother of Cheops.

Unlike Petrie, Reisner took time over his publications, and has left much material to be worked up by others. One reason for this was that being a scholar as well as an archaeologist and excavator, he was able, and inclined, to deal with inscriptions and other texts for himself, as well as with works of art and handicraft.

He will be remembered as a man of large frame, wide outlook, and warm heart, a teacher as well as a leader in action. He was elected an Honorary Fellow of the Royal Anthropological Institute.

J. L. MYRES.

REVIEWS

PHYSICAL ANTHROPOLOGY

Racialism against Civilization. *By J. Zollschan. With a preface by Julian Huxley. London: New Europe Publishing Co.*, 1942. 63 *pp. Price* 1*s.* 6*d.*

Race and Racism. *By Ruth Benedict. London: Routledge*, 1942. *viii*+175 *pp. Price* 7*s.* 6*d.*

Race, Reason, and Rubbish. *By Gunnar Dahlberg. Translated from the Swedish by Lancelot Hogben. London: Allen and Unwin*, 1942. 240 *pp. Price* 8*s.* 6*d.*

Dr. Zollschan's booklet is concerned primarily with race considered as a political factor. It discusses the use of the abstract idea as a basis for a new theory of the state. 'Practical policy is always influenced by the 'social theory of its time,' and racial doctrine was sufficiently pliable to be pressed into such a service. This was so because anthropologists had failed to reach agreement regarding a particular racial classification, or a definition of the general concept of race. Scientific study of the topic is in a transitional stage. As with other branches of taxonomy, reconsideration of the particular problem has been necessitated in recent years, partly by the rapid increase in relevant descriptive evidence, but still more by the development of genetics which has re-orientated theories of heredity and evolution. Agreement among authorities cannot be expected at such a time, and any one who cares to misuse the concept in question for ulterior purposes is not likely to meet with united opposition. Dr. Zollschan must have been one of the first observers to appreciate the full significance and dangers of the racial creed which was adopted by the Nazi party. He devoted himself to the task of persuading scientific workers to collaborate in denouncing it. A diary of his efforts directed towards this end is given as an appendix to his latest publication. They began in 1933 when 'a plan for a scientific examination of the theoretical foundations of racial philosophy' was submitted to President Masaryk. One result of this agitation was the Race and Culture Committee set up by the Royal Anthropological Institute and the Institute of Sociology in 1934. It produced a pamphlet on 'Race and Culture' which inevitably reflected the unwillingness of the contributors to commit themselves to any forthright pronouncement. It is proper that judgment should be suspended if informed opinion regarding a topic has not crystallized, but any suggestion of indecision is bound to deprive a statement of a large share of any immediate influence it might have in moulding public opinion. One of the most important results of Dr. Zollschan's campaign, which was continued until the outbreak of the war, was the formation of *Races et Racisme*, a group of French scholars which issued a bi-monthly bulletin with the same title. He freely admits that the attempt to secure a scientific edict regarding race was unsuccessful, but is it not going too far to say that events have 'nullified all our previous achievements'? Success in a war of ideas can seldom be tangible and complete, and surely Dr. Zollschan's efforts have not been wasted. It is to be hoped that they will be continued. We may anticipate that one particular form of racial superstition will be overthrown with the downfall of the party which promulgated it, but the need for scientific teaching regarding racial questions will remain. Indeed, it is likely that racial problems will be of great importance in the immediate post-war years, and the service of those who have paved the way to a rational treatment of them may well bear fruit then.

Dr. Benedict deals with race from a more academic point of view. Her book is divided into two parts and it is concerned throughout with the object of combating 'racism.' The first part presents the evidence relevant to a biological concept of race, and the relations between race and culture are discussed incidentally. The characters used for the purpose of classification, the laws which govern their inheritance, and the effects of the migrations and minglings of peoples are treated in turn in a somewhat cursory way. The treatment of the topic is on the same lines as that adopted by most anthropologists to-day, though no general definition of race, and no particular racial classification, emerge from it. Such problems remain to be solved, and the latest evidence seems to have done little more than emphasize their difficulty, and discredit earlier attempts to solve them. It was this inconclusiveness which left the way open to those who chose to use the idea of race for political ends, and Dr. Benedict deals with this theme in the second part of the book. In an interesting survey, she treats 'racism' not as a phenomenon encountered only in modern times, but as one which has been in evidence in various forms since the dawn of history. It is concluded that racial differences have never been the cause of conflict, but only an excuse for it: 'in order to understand race persecution, we do not need to investigate 'race; we need to investigate *persecution*.' The moral drawn is that anthropological teaching can only lay the basis for the amelioration of such conflicts, if it is associated with the ideals of a functioning democracy. Well-chosen quotations from a variety of ancient and modern writers are appended to each chapter of *Race and Racism*.

The translator of *Race, Reason and Rubbish* describes the author of that book as 'one of the six living people 'who know most about heredity.' It is an introduction to genetics written for the purpose of elucidating race in man. The earlier chapters dealing with general aspects of the subject are followed by others concerned with human heredity, and racial questions are discussed at the end of the volume. All the evidence considered is directly or indirectly relevant to the anthropological problems of group heredity. But knowledge of genetical theory does not provide an immediate solution of these problems. As Professor Dahlberg explains, the geneticist applies the laws of individual heredity to populations, on the assumption that these are biologically discrete groups. He even says that 'a race like a species must be an 'isolate or group of isolates,' though it is admitted in another place that 'species are the smallest groups which 'have sharp boundaries.' But the geographical distributions of anthropological characters of living people suggest that there are no truly isolated populations to-day. The same conclusion is derived from skeletal measurements relating to all past times for which the evidence is at all adequate. Any parts of the system that may be distinguished are essentially confluent, not detached even temporarily, and hence races cannot be supposed to be of the same nature as species. This is the peculiar difficulty of racial classification. The discussion that Professor Dahlberg gives of certain points relevant to the problem is of particular interest to anthropologists. They have been disturbed, for example, by the discovery that there has been a secular increase in the average statures of European populations since 1850. This has frequently been attributed to an improvement in the

standard of living. It is now suggested that the change may have been due not to better nutrition or hygiene, but to the breaking up of 'isolates,' entailing the dispersal of dominant genes which may determine tallness. This speculation accords well with the anthropological evidence: if it is substantiated, size characters will still have to be considered as not ideal for taxonomic purposes. The last three chapters of the book deal with the crude racial theories that have been used for propaganda purposes, and with the Jewish question in particular. They are an effective counterblast to the Nazi creed.

Race is basically a biological matter, but racial questions have many ramifications. Several different aspects of them are dealt with in the three books now reviewed. These welcome contributions remind us of the point that a comprehensive treatment of racial problems necessitates collaboration between specialists in different branches of anthropology. They should unite to denouncing the vicious nonsense of their science. But merely to discredit is not enough: one system of values can only be displaced effectively if its place is taken by another and better system. G. M. M.

78 The Brain and its Role in the Phylogenetic Transformation of the Human Skull. *By Franz Weidenreich. Trans. Amer. Philosph. Society, 1941, xxxi, pp.* 321–442.

The Torus Occipitalis and related Structures and their Transformation in the Course of Human Evolution. *By Franz Weidenreich. Bull. Geol. Soc. of China,* 1940, *xix, pp.* 480-540.

In both of these monographs Dr. Franz Weidenreich deals with the evolution of certain features of the human skull. In the first monograph he considers a problem which has engaged the attention of several generations of anatomists—namely, how did it come about, in the later phases of human evolution, that an increase in brain volume was accompanied by a reduction in size of tooth, jaw, and face? The facts are not in dispute, but the biological factors which determine and co-ordinate the development of brain and that of the apparatus of mastication still await discovery, for in this matter Dr. Weidenreich has no assistance to offer to the enquiring anthropologist.

His last paragraph sums up excellently his general conclusion; so I shall take the liberty of quoting it:

> 'All the facts imply that phylogenetic evolution of man proceeds under the form of an orthogenetic development. The tendency to enlarge the brain accompanying the acquisition of higher organization is characteristic of the primate group as such. In spite of the deficiency of the available fossil material, it nevertheless is evident that the mass of the brain has increased with every new step taken in the direction leading to recent man, and that as a consequence of the general law which determines the growth relation between brain case and face and proved to be unalterably valid for each evolutionary phase, the transformation of the skull could only take the general course which it actually has taken.'

In brief, man evolved because his brain got bigger and his jaws smaller; no other course was possible. We are left wondering why the gorilla—the biggest brained of living anthropoids—has also the biggest teeth and jaws.

In the second monograph, Dr. Weidenreich deals with the modifications undergone by that part of the skull which gives attachment to the neck. Here he has much to describe which is both new and of interest. In numerous drawings he depicts the bony nuchal markings to be seen in fossil human skulls from China and Java (*Sinanthropus, Pithecanthropus, and H. Soloensis*) and compares the bony impressions of these skulls with those met with in the gorilla, H. Neanderthalensis, Australians, and Tasmanians and in the modern Chinaman. He denies that the bony ridges which precede the expansion of the nuchal muscles are of the same nature as the temporal ridges which outline the expanding temporal muscles. The reviewer is of opinion that a closer study of the nuchal changes which take place in the skulls of man and ape in the later years of growth is likely to convince Dr. Weidenreich that in this he is mistaken.

A. K.

79 Anthropometric Investigation of the Mādhyandina Brahmins of the Maratha Country. *By Iravati Karve. Bulletin of the Deccan College Research Institute, Vol. III, No. 1, 1941. 74 pp. and Appendix.*

The Mādhyandin is a sub-group of Sukla Yajurvediya Brahmins, and its members, who do not marry with any other Brahmin sub-caste, are to be found mostly on the two banks of the River Godavari from Nasik to Nanded, and northwards in Khandesh, C.P., and Berar.

Dr. Karve drew his subjects from nine groups of towns and villages, and measurements and observations were made on 624 male and 325 female adult subjects. Blood samples were collected in 282 cases. The data obtained were subjected to an exhaustive statistical analysis, and the conclusions arrived at are that the Brahmins of Eastern Mahārāstra are medium-statured, long- to medium-headed, medium-nosed and broad-faced. They show two distinct sub-groups: the one contains a long-headed, broad-nosed, and broad-faced element, and the other is notable for its broad heads, and narrow-to-medium noses. All three elements possess straight dark hair, dark eyes, and brown skin, though curly hair occurs rarely and light skin is also sometimes found.

The investigator's suggestion is that the majority of medium-headed, medium-nosed people are representative of a distinct racial strain common to many parts of India. His broad-nosed, long-headed element, on the other hand, seems to have affinities with the Paleo-Indian racial type, although differences in hair-form point rather to the east and central section of these forest peoples, wherein a Paroan element is postulated, than to the south or western zone. The brachycephals, who are characterized also by a flat occiput, are attributed to the intruding belt of brachycephaly which runs from Sind via Gujarat and Mahārāstra up to Bengal.

Considered statistically, a considerable degree of heterogeneity is suggested in this population. Dr. Karve's explanation is that a certain amount of social stratification is revealed in the different racial components which go to make up the present sub-caste of Mādhyandina Brahmins. Hair samples were not taken, and it is possible that terminologically the adjective 'straight,' in regard to hair form, may require further definition.

K. L. L.

NORTH AMERICA

80 Diseases of and Artifacts on Skulls and Bones from Kodiak Island. *By Aleš Hrdlička. Smithsonian Miscellaneous Collections, Vol. 101, No. 4. Washington D.C., 1941. 14 pp., with 11 plates.*

These observations result from excavations on sites inhabited by the predecessors of the 'Koniag' population found by the Russian discoverers of Kodiak Island in Alaska; an oblong-headed, moderate-sized people essentially related to the American Indian, but with some Eskimoid features. They practised cannibalism

and mutilated their dead; suffered little from disease, except senile arthritis; exhibit occasional deformation of the skull and trepanning; drilled suspension holes in certain bones, as if to fasten them together, added artificial eyes of ivory to skulls, and fashioned skulls as bowls and dippers. J. L. M.

Bibliographia Primatologica: a classified bibliography of Primates other than Man: Part I. *By Theodore C. Ruch, with an introduction by John F. Fulton. Yale Medical Library (Historical Library) Publication No. 4. Springfield, Illinois (C. C. Thomas), 1941. xxviii, 244 pp. Price* $8.50.

81 This is the first part of a projected bibliography embracing all fields of primate biology. Part II will deal with the pathological sciences, and with taxonomy, and its preparation is 'considerably advanced.' The arrangement is by subjects, except for the older literature, where it is chronological; and the introduction includes useful discussion of the complexities of any such classification. In general, the abbreviations and notation of the *London World List of Scientific Periodicals* is followed. As the Psychobiology includes such sections as 'intelligent' and 'social' behaviour, it will be seen that the book is likely to be of interest to others besides comparative anatomists. For zoologists it is a distinct convenience that each entry indicates the genus or genera of primates with which the article deals; and the introductory sections, on older works, should be consulted by students of the history of biological sciences.

Dr. Fulton's announcement that the Yale Medical Library, 'having collected the literature of the primates 'on paper' proposes now 'to collect such literature in 'fact' is good news. No more suitable home could be found for such a collection than the University which has maintained the researches of Professor Yerkes.

J. L. M.

EUROPE

Peasant Life in Jugoslavia. *By Olive Lodge. London (Seeley Service), 1941. 303 pp. Price* 21*s.*

82 A very careful study of old customs existing in South East Europe, well illustrated and the more valuable as, probably, many will not survive the present world upheaval. Forty years ago when I began work in these lands and roads were few, railways fewer, and motors unknown, I found some far more primitive conditions than any recorded in this book. There were the dug-out huts, with wooden 'dugkennel' roofs, of the herdsmen on the *katun* (summer pastures) in Montenegro; and cave-dwellers in the river banks near Podgoritza. In remote mountain houses, save for coffee, tobacco, and gunpowder, life had changed little for a thousand years. Few utensils save wooden bowls, hacked by hand, not turned, a large caldron, and the coffee-pot. Coffee not ground, but pounded in a hollowed tree-trunk. No artificial light save a resinous pine sliver, sometimes stuck to the wall in a lump of wet clay. No glass in the window.

Swiftly and sharply has the West penetrated Balkan fastnesses. Many customs have been dropped or modified. Under *Funerals* the author does not mention the strange custom which I witnessed, of holding an elaborate mourning ceremony over a dummy body when death had taken place abroad. . . . Nor the wild dancing and leaping of the tribesmen of Montenegro when yelling death wails, beating their breasts and temples in a frenzy. King Nikola had forbidden face-clawing, and fined the whole tribe should a case occur. But I saw a beautiful woman rip her face from forehead to chin—and promised not to tell.

As this book shows, customs differ much in the lands now called collectively Yugoslavia. The Slav did not enter the peninsula till the beginning of the Christian era, when it was largely inhabited by Illyrians, Thracians, Macedonians and Romans, and traces of pre-Slav custom still exist, notably tattooing in Bosnia. Invaders and peaceful penetrators have left their mark. King Alexander's over-hasty and harsh attempt to unify this mixed mass led to his assassination.

As to marriage, an error has crept in. The Orthodox Church does not 'forbid marriage till after the seventh 'generation,' but till after the *seventh degree*, reckoned thus: the father counts as 1; his children (brother and sister) 2, 3; their children (first cousins) 4, 5; their children (second cousins) 6, 7. The next generation is inter-marriageable. But I found that in Montenegro where the tribes till recently were exogamous, such marriages were not thought desirable. The head of each Montenegrin house kept his pedigree back to the founder of his tribe, who fled from the Turks some twelve or thirteen generations ago. These lists were read in church on Zadushnya Subota (Soul's Saturday) at the beginning of Lent, by the priest, and all were prayed for; and the funeral meal of boiled wheat and wine was eaten (*kolyiva* or *parhandiya*). Bread and wine for the souls was laid on a table at night in the house where I lived. No funeral feasts *ever* took place on graves.

King Nikola decreed that no marriages should take place under sixteen years of age, but informal betrothals of young children were agreed upon between families. And as a priest might not marry after his final ordination, I heard of cases where a boy of twelve or thirteen was married to a girl, prior to being sent abroad for training; the marriage to be consummated on his return as a *Pop*. The fact that he could not marry after becoming a priest, made him a much desired husband. 'He must 'treat you well and not overwork you, for he can't get 'another!' I was told. A wife I found reckoned—as did Antigone—her brother as her nearest and dearest. 'You can marry again. But you can never get another 'brother.' I remonstrated when some little girls were given no supper because, though at work all day, they had not finished their task of knitting, and was told 'They must learn to work. They must work much 'harder when they are married.'

The Moslems, says the author, beat their wives. I found, also, that the Christians did too, and was begged: 'Do live in our house. He won't dare to beat me if 'you are here.'

I found many taboos. A woman was unclean for forty days after childbirth and might not knead bread nor cook till churched; the food would be poisonous. But she had to fetch water and wood three days after giving birth. I was so often asked by women who had borne but one child to give them a remedy, that it is evident that such heavy work, too early performed, caused often a displacement of the womb. A young woman I knew died of hæmorrhage by the wayside, when fetching water. 'All is as God wills,' was the comment. King Nikola appointed a trained Austrian midwife to teach better birth-practices.

I am surprised that the author should say that tuberculosis (*sushitza*) hardly existed till after the war of 1914–18. When on relief work in the winter of 1903–4 in the villages around Lakes Ohrid and Prespa (then reckoned Bulgar districts) I found the peasants riddled

with every form of tuberculosis. It was rampant too in a virulent form in Montenegro. An Orthodox Bosnian doctor trained in Vienna, under whom I worked in the war of 1912-13, said: 'We South Slavs are the most 'tuberculous people in Europe; 30 per cent. of us are 'infected. I don't count an apex, for I have one 'myself.'

The custom of many people sleeping in one room, and the habit of incessant spitting, made the disease, once introduced, spread like wild-fire; and the recent use of glass for windows and closed iron stoves for heating further prevented ventilation. I gathered that the disease was introduced about the middle of the nineteenth century when the poorer began to go abroad in search of work, and the richer to send their sons to Italy, France, and Austria for education. Coming from fresh air into towns, they had no immunity, and too often came home but to die.

Only in Bosnia-Herzegovina under Austrian administration were wide and wise measures taken to combat tuberculosis, syphilis (which raged), malaria, and small-pox. Quinimizing and vaccination went on; good and simple teaching was given in the schools. It was the beginning of health work in the Balkans, but was bitterly resented by the peasants, who were indignant when the teachers told the children not to spit, for their mothers had carefully taught them to do so; and they were angry when asked to change their insanitary habits. But this work was not in vain. The author shows that sanitary work has now extended through Jugoslavia. Perhaps the spread of medical knowledge had diminished the many pilgrimages to shrines in search of miraculous cures, as the author does not describe any. I went on five, and witnessed strange doings. Moslems went to Christian shrines, and Christians in return consulted Moslem old women. Each believed the other religion possessed occult knowledge.

Change is inevitable. The war will not have been quite in vain if the better, not the worse, phases of Western civilization spread Balkanwards. Let us hope the more harmless and picturesque customs will survive. We are grateful to the author for the work and patience spent on making this record, while it was yet possible.

M. E. DURHAM.

PACIFIC

The Isneg Farmer. *By Marius Vanoverbergh, C.I.C.M. Catholic Anthropological Conference, Vol. III. 4. 281–386 pp. Washington D.C., 1941. Price* $1.50.

83 This is a careful and very detailed account of Isneg agriculture, and of all the ceremonies and magical aids which it involves. Rice is the principal crop, but tobacco is exported; and there are many kinds of garden produce, Indian-corn, taro, sweet-potatoes, sugar-cane, bananas, yams, and the like; there are also orchards of coco-palm, citrus fruits, breadfruit, mango, and so forth. Other plants are not kept in gardens, but set in the wild, such as coffee, cacao and betel, and several decorative flowers.

The sociology of the Isneg is no doubt described in other memoirs; but if a section like this one is printed and sold separately, it would be a good deed to mention in it who the Isneg are and where they live. Presumably, like their *shemicles*, they belong to 'Mountain Province, Philippine Islands': but which island? J. L. M.

The Mayawyaw Ritual: Go-betweens and Priests. *By Francis Lambrecht, C.I.C.M. Publications of the Catholic Anthropological Conference, IV. 5. Washington, 1941. 713–754 pp. Price* $1.00.

84 The Mayawyaw are a people of the Mountain Province of Luzon, Philippine Islands. Their life is guided by immemorial custom varied only in detail by economic changes affecting the value of payments. They have no authorities and make little use of the civil authorities of Luzon. But custom depends on tradition, and tradition depends on memory, and the application of traditional rules to occasions demands a clear head and common sense.

Hence the significance of 'go-betweens' and priests. They are the experts to whom ordinary people turn for guidance, and—almost inevitably—without whom the more important affairs cannot be safely conducted. We too have our experts 'learned in the law.' Within his proper department, the performance of ritual, the function of the priest is the same; and both go-between and priest receive customary remuneration, train pupils to succeed them, and accumulate and transmit genealogies and tales, as well as invocations, rites, and rules of law. Some of the information published here was obtained in return for fees like those paid by a native aspirant to priesthood (p. 735). With personal belief or morality the priest has no concern. Neither 'go-betweens' nor priests form a caste or corporation, but are held in personal esteem according to their proficiency.

Here is a valuable glimpse of a very elementary phase in the development of professional classes; and examples of their practice show how little essential difference there is between these and their 'civilized' counterparts.

J. L. M.

GENERAL

(1) Science, Society, and 'Everyman.' (2) Our Opinions and the National Effort. *By Professor A. P. Elkin. Sydney, N.S.W., 1941. 20–40 pp.*

85 The first of these is a presidential address to the Royal Society of New South Wales, and reviews, first, the activities and the function of the Society, and then the general relation of science to public life, and especially of anthropological studies to social problems: race-propaganda, half-castes, the administration of native races. There is also a suggestive examination of the Royal Society itself, as a piece of social structure, liable to changes in an unstable world and confronted with new social problems to be examined by its specific method. This leads to a strong plea for the recognition of sociology as an academic and educational subject; and the interesting point is made that this study has in recent years been most liberally endowed and prosecuted in the newly-created states of Europe, and in those which have the most urgent social and economic problems, such as Czechoslovakia and Yugoslavia. Dr. Elkin might have added China and the United States. In Australia, though there is no chair or lectureship in sociology, the study has made a sound start in the University of Sydney as an element in the Anthropology course.

The other pamphlet has the same objective outlook, and is a record of the actual means by which public opinion in Australia is formed, with some searching suggestions for amendment: 'a small mirror' of our opinions on various aspects of a grave national problem. It is based on a questionnaire operated by twenty observers, whose comments are included. It is the procedure of a scientific expedition to Back-of-beyond,

applied to Sydney, Newcastle, and neighbouring communities. The conclusions are not at all cheering, but the first step to convalescence is diagnosis. Short and tentative as it is, this is a very valuable essay, and a remarkable document in the sociology of Australia.

J. L. MYRES.

86 Poetry and Prophecy. *By N. K. Chadwick. Cambridge, 1942. 8vo. xvi, 110 pp., with 7 plates. Price 7s. 6d. net.*

Here are collected, in substance, three papers read at meetings of the British Association (1937–8–9) on questions arising out of *The Growth of Literature* (Cambridge, 1932–1940) and especially out of Vol. III. "What is it that dictates the form of man's spiritual "visions? How and why do we communicate them to "our fellow-men? How and why do we sometimes "endeavour to give more or less permanent form to our "thoughts?" Obviously the answer presumes wide investigation and comparisons, and for data readers are referred to *The Growth of Literature*; but sufficient examples are given to illustrate the main points of theoretical argument. Much attention is given to the 'Trance of the Seer,' as it is described in early European cultures, and found in modern oral literature. Inspiration is found to relate to revealed knowledge of all kinds, cosmological and historical, as well as the "hidden present" and the future. The function of the seer is educational as well as directive, and on knowledge of facts competition is possible and progress cumulative. "I know the number of the sand, and the measures of the sea," was the credential of the Delphic Oracle to the messengers of Croesus. For this function the seer needs not to be neurotic nor epileptic; testimony is ample that he must be tough himself, and have his 'trances' under control. This leads to discussion of 'mantic' technique, when the "ultimate pronouncement . . . must lie with the psychologists." But it is argued that the oral literary works of the seers are sufficient testimony to their influence; and the same argument as to the employment of magic and ritual leads to the same conclusion: ritual, especially, "stimulates the imagination by radiating knowledge," and has its fine flower in drama. Finally, comparison of the widespread use by seers of narrative, of journeys made by themselves to far countries or another world, suggests that their vast geographical distribution is the periphery of a cultural movement propagated within historic times from early centres of advancement; not a convergence of psychological experiments. That is a thesis on which there may well be difference of opinion, and it is well that the diffusionist view should be so diagrammatically presented.

J. L. M.

87 Language, Culture and Personality: Essays in Memory of Edward Sapir. *Sapir Memorial Publication Fund, Menasha, Wisconsin, U.S.A., 1941, pp. 298 with 6 plates and 2 maps.*

Edward Sapir was a writer of exceptional genius, who illuminated every subject he took up, and whose interests and knowledge were extraordinarily wide. The essays in this book were written by former students of his for presentation to him, but unhappily he did not live to see their publication. It contains eighteen essays arranged in four sections, namely: Problems of Linguistic Classification, Linguistic Behaviour and Thought, The Development of Culture Patterns, and Culture Norms and the Individual. All the papers are good, and many stimulating ideas are to be found in them.

Space forbids mention of more than a few of the essays. Notable are: *Methods of Classification of Indian Languages* by Harry Hoijer; *The North American Language still spoken*, by C. F. Voegelin; *Observations of Pattern Impact on the Phonetics of Hilligonk*, by Morris Swadesh; *Culture-changes and Language*, by George Herzog; *The Relation of Habitual Thought and Behaviour to Language*, by B. L. Whorf; and *Patterning as exemplified in Navaho Culture*, by Clyde Kluckhohn.

M. B. Emeneau contributes *Language and Social Forces: A Study of Toda Kinship Terms and Dual Descent*. This is a most valuable paper, supplementing and correcting the work of W. H. R. Rivers, and describing fully the kinship terms and their use. Dr. Emeneau has published elsewhere his notable discovery of dual descent among the Todas, and he further elucidates it here. The importance of dual descent, the existence of which has quite possibly been overlooked elsewhere as it was among the Todas, has been stressed by Dr. G. P. Murdock in a recent paper, and should cause a drastic revision of current views on unilateral exogamous groups. The fact that it was overlooked by such an able investigator as Rivers shows that there is a need for reinvestigating many cultures already studied, and for giving very full detail, and also that recent suggestions that it is not worth while investigating cultures hitherto undescribed, on the ground that we already know enough of similar ones, and that they may be allowed to go into oblivion, are quite unjustified. One *never* knows what may turn up, either in a hitherto unknown culture, or in one already described; and in most cases we do not know enough even of those which have been described.

Another paper, also on South India, is by David G. Mandelbaum, *Social Trends and Personal Pressures: the Growth of a Culture Pattern*. It is a most instructive study of the evolution of new gods among the Kotas.

It is a pity that the book contains no index and no list of illustrations.

RICHARD C. E. LONG.

88 Anthropology and the Future of Missions. *By John M. Graham and Ralph Piddington. University of Aberdeen Anthropological Museum Publications, No. 1. Aberdeen, 1940. 28 pp. Price one shilling.*

This thoughtful plea for collaboration, though on familiar lines, deserves the strongest commendation to all concerned: not only to anthropologists and missionaries, but to administrators and teachers, and to those other examples of European culture from whom the natives of any country where they intrude, necessarily learn so much, and also suffer so much in the process. Each of these classes of Europeans has its peculiar need to establish reasonable and considerate relations with the native population, and its special temptations to do what leads to the opposite. Each has also its own contribution to make, to a broader and better-founded outlook and approach, and also its own (often well-grounded) criticisms of the outlook and approach of the others.

In a short survey, much has to be presumed, but general agreement on main issues opens at once further questions and problems of method in dealing with them: the causes of maladjustment (p. 9); the need for large-scale amelioration, only partly by directly inculcating Christian beliefs and practices, but partly also by appreciating and adopting those elements of native culture which are compatible with Christian conduct—a problem which confronts the social reformer in Europe also, and is fundamental if Indirect Rule is to be either *rule* at all, or indirect and not imposed from outside.

Account is taken of the Oxford Conference of the Churches in 1937, with some friendly criticism of its findings, and it is urged that with the help of anthropologists and others directly concerned, mission policy

may be clearly and definitely formulated, as the propagation less of doctrine and ritual than of a way of life.

J. L. M.

89 A Report on the Working of the State Museum, Pudukkottai, *for Fasli* 1350 (*July* 1, 1940–*June* 30, 1941). *Pudukkottai*, 1941. 36 *pp.*

This museum of an Indian State, of which the curator is M. R. Ry. K. R. Srinavasa Aiyar, M.A., shows a year's very satisfactory progress. Out of 135,503 visitors 0·6 per cent. were literate and signed their names; to the remainder their gain was literally 'knowledge through the eye.' Interesting accessions are recorded in prehistoric archaeology; the bronzes include a fine copper figure of Nṛsiṃha with eight arms (a rare type) and elaborate attributes. Two new Tamil inscriptions, and some gold and silver coins should also be noted. Field work includes the excavation of the Amarkóvil temple at Kodumbálúr, of unique type, with reliefs and inscriptions, probably built in the ninth–tenth centuries, A.D.; and of the Jain temple mound in Sembáttur; and repairs to the Śiva temple at Viráliur, also of the ninth–tenth centuries. A frescoed cave at Sittannavásil and eight other monuments, have been protected.

J. L. M.

NORTH AND CENTRAL AMERICA

90 Notes on Middle American Archæology and Ethnology. Nos. 1–6. *Carnegie Institution of Washington, Washington D.C., U.S.A.*, 1940–41. 28 *pp.*

This is a new and very useful series of short notes issued by the Carnegie Institution in order to provide a medium of publication for those random bits of information which all anthropologists accumulate. As the preface says, such unconsidered by-products of one man's studies may well be of value to others, and even if they are not immediately interesting to anyone, they should at least be recorded in permanent and accessible form. This is an excellent idea. Correspondence should be addressed to J. Eric S. Thompson, 10, Frisbie Place, Cambridge, Mass., U.S.A.

No. 1 is a note by Dr. A. V. Kidder *on Clay Heads from Chiapas, Mexico*, with a natural-size illustration, and is important as throwing light on the ceramics in the neighbourhood of Escuintla, which is now receiving considerable attention from students.

No. 2, also by Dr. Kidder, *on the Pottery from Champerico, Guatemala*, with two illustrations, discusses the phase which this represents.

No. 3, by Mr. E. Wyllys Andrews, on *The Ruins of Culabá, North-Eastern Yucatan*, gives a plan and description of this new site, so far as he was able, under very difficult conditions, in blinding rain, and with only a few hours time at his disposal. It appears to be an important site which has suffered much from vandalism.

No. 4, by Mr. J. Eric S. Thompson, describes *The Missing Illustrations of the Pomar Relación*. It contains one illustration. The complicated question of the missing illustrations is dealt with and compared with other illustrations and descriptions.

No. 5, by E. Wyllys Andrews, is an extremely interesting *Ethnological Note from Chivituk, Southern Campeche*, on the modern superstitions regarding the ancient idols. Unfortunately these beliefs lead directly to the destruction of the objects. The idols will be illustrated in a report now in preparation.

No. 6, by J. Eric S. Thompson, on the *Prototype of the Mexican Codices Telleriano-Remensis and Vaticanus A.*, gives a detailed and interesting study of the interrelation of these two codices which are closely connected; he arrives at the conclusion that both derive from a prototype now lost.

RICHARD C. E. LONG.

91 Anasazi Basketry: Basket Maker II through Pueblo III. . . . A Study based on Specimens from the San Juan River Country. *By Earl H. Morris and Robert F. Burgh. Carnegie Institution of Washington. Publ.* 533. 1941.

This admirable study attempts 'to reveal in correct 'general outline the history of basket-making among the 'early peoples of the San Juan country' which lies within the present States of Arizona, New Mexico, Colorado, and Utah. It is based on the authors' and other archaeological work, and on studies of Technology, Forms, and Designs. Its presentation is all that the technologist could desire. Any difficulty in interpreting a necessarily technical text is immediately resolved by an examination of the 'Graphic Glossary,' the series of clearly drawn diagrams with their explanation leaping immediately to the eye, and the 43 beautifully reproduced plates with their attendant legends. Apart from the results obtained the monograph has considerable value for the field- and laboratory-worker because of its explanation of methods employed in obtaining, preserving, restoring and cleaning, and analysing material. Though the table of contents is very detailed, an index in alphabetical order would be a convenience.

T.K.P.

CORRESPONDENCE

92 Cosmas' Word for 'Gold.' *Cf.* MAN, 1942, 30.

SIR,—In MAN, 1942, 30, Mr. Wainwright says he cannot find any satisfactory derivation for Cosmas' word *tancharn* or for the word σάγγαρις, which a scholiast says is Persian for 'gold.'

Unless my memory fails me, the Baluchi word for 'gold' is *tango*. This is fairly near it, and Baluchi is very near Persian. So perhaps the scholiast was right after all.

It is true that the Baloch themselves were not in Persia as early as the sixth century A.D. If their tradition is right they would have been still in Northern Syria then, or else in Iraq, and their language was probably Semitic. Possibly they may have brought the word *tango* with them; but it is just as likely that it belonged to the vernacular of S.E. Persia which they adopted when they went there in the eighth century. Unwritten dialects easily escape dictionaries.

Meopham Green, Kent. C. M. BAKER.

93 SIR,—There is a Persian word *tanka* (or *tanga*) meaning 'gold,' 'coin,' etc. I do not think it is used now, unless perhaps in dialects; but it denoted a particular coin in Safavian times.

27, *Northmoor Road, Oxford.* C. N. SEDDON.

Cowries representing Eyes. *Cf.* MAN, 1942, 71.

94 SIR,—Mr. Jeffreys is perhaps an instance of the old saying, 'Convince a man against his will'; it seems, therefore, not worth while to continue this correspondence. But before the correspondence closes on my side, I should like to bring forward some further evidence that the cowrie has no special sex significance, but represents the eye. In the female figure from New Guinea, published in fig. 1, the cowrie is undoubtably the eye. One would have expected that had it represented the vulva it would have been placed in the appropriate position, where, however, there is nothing to indicate the sex organs. When d'Albertis visited Mawatta in 1875 he noted that the skulls of those slain in battle were covered with a preparation of wax, the eyes being represented by small cowries (W. N.

COWRIES REPRESENTING EYES

Beaver: *Unexplored New Guinea*, p. 62). The skulls mentioned by Haddon (MAN, 1918, 99) are now in the Ethnological Museum, Cambridge: these have cowries set horizontally in the eye sockets. W. Behrmann (*Im Stromgebiet des Sepik*, pp. 122, 123) mentions three skulls with cowrie eyes. In all these instances of decorated skulls the cowrie is connected with the death and death ceremonies of males. As regards the feeling of savages towards the genitalia of women, G. Landtman's remark is illuminating (*Kiwai Papuans*, p. 250): 'The female 'organs are as perilous as an open grave.'

I am indebted to the authorities of the Ethnological Museum, Cambridge, for permission to publish this figure. The photograph was kindly made for me by Mr. G. Strickland.

M. A. MURRAY.

Cambridge.

An Unusual Implement from Egypt, in the Seligman Collection. *Cf.* MAN, 942, 62.

95 SIR,—The chert implement described in MAN, 1942, 62, is from the Seligman collection in the Pitt Rivers Museum at Oxford (1942, 12, 761), and had the Curator known that it was about to be published, the specimen itself would have been sent for examination, and the commentator would not have needed to depend on a photograph. Professor Seligman has described exactly the marks of use, and from them it would appear, as he says, that the implement has been used as a chopping tool. It does not appear to have been used for heavy work.

Pitt Rivers Museum, Oxford.

T. K. PENNIMAN.
FRANCIS KNOWLES.

Magic and the Unconscious. *Cf.* MAN, 1941, 102; 1942, 56.

96 SIR,—Dr. Róheim's courteous letter to some extent answers my questions, but it is to be hoped that his promised paper will contain a more exact account. Did Patient No. 1 profess to make plants, etc. grow by 'rubbing the palms of his hands together?' (1942, 56) or was he 'performing *intichiuma* (increase) 'ceremonies by rubbing his body?' (1941, 73). Did Patient No. 2 really say: 'I am doing this to hasten or 'retard the motion of the sun?'

Dr. Róheim seems to equate 'magical' with 'prelogical,' but magic may be quite logical; it is its premises, not its deductions, which are faulty. No logical fault could be found with a theory that all circular movements affect one another, nor to any deductions which might be made from it.

RAGLAN.

Corrections to MAN, 1942, 19.

97 SIR,—I enclose a list of corrections to my article in MAN, 1942. The errors arose through my not being able to see the proofs.

1. Title should *read* "The Dakakeri People of Niger Province.' Zuru Division was transferred from Sokoto to Niger Province some years ago.
2. P. 27, l. 12, *read* 'play from the left.'
3. P. 29, col. 2, l. 13 from bottom, *read* '(fig. 9 *d*)'; l. 4 from bottom, *read* '(fig. 9 *a*, *b*, *c*,)'.
4. Fig. 9 *c* is the upper surface of a wooden clog: fig. 9 *d*, has been printed upside down.
5. P. 30, col. 2, l. 6, *for* 'only' *read* 'alone.'
6. P. 31, l. 8 *add* '(fig. 13).'
7. P. 32, l. 1 *delete* '(fig. 14),' which is the granary, not the larger store house.
8. P. 32, col. 2, l. 12 from bottom, *read* 'Near the city of Kano.' This sentence should be in parenthesis.
9. P. 32, the last sentence should have been omitted.
10. P. 33, col. 2, l. 8, *read* 'makes.'
11. P. 33, col. 2, l. 3 from bottom, *read* '(fig. 19, l. 7).'
12. P. 34, end of l. 4, *add* '(fig. 19, 15–27).'
13. P. 36, l. 7, *read* 'Zuru': l. 11, *read* 'Rikah, Kainya'; ll. 3, 22, 23, 24, insert comma between names of towns.
14. Substitute fig. 19, 5, *for* fig. 19 (20), which was made from a very faded pencil drawing and is probably erroneous.
15. *For* 'ugumba' *read* 'ugamba.'

R. T. D. FITZGERALD

[*Apart from obvious blunders, articles in* MAN *are printed in accordance with the author's copy.* ED.]

1942

MAN

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